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The Hospital Trustee and His Responsibility

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WHEN A VENTURESOME SPIRIT and a youthful untutored mind act unitedly the result is very often a predicament. I feel very frankly that such is the result. My gray hair might negative my claim to being youthful in some aspects, but with reference to the subject matter of this paper I am youthful. I would perhaps be less untutored had I studied my job more diligently since I became a trustee, but for this, apologies are unavailing at this time. As a matter of fact, I have wondered if the congenial individual who inveigled me into speaking on this subject did not in fact do so with the idea and with the hope that I would perhaps give the subject greater study and learn more about "The Hospital Trustee and His Responsibility."

Nevertheless, it has been well said:

"Not a drop from a bottle that is o'er full
will flow
'Tis the half empty vessel that freest emits
The contents within it
And 'tis so with men's wits."

Regardless therefore of the feeling of inefficiency it may be possible for me to make a few remarks and throw out a few thoughts and suggestions in which the word "trustee" is at least often used.

I do not know the age of the public or semi-public hospital. Perhaps they have existed so long that, as the lawyer would say, "the memory of man runneth not to the contrary," but throughout the existence of this type of hospital it will be noted that the management and direction thereof has almost universally been in the charge of trustees or regents or boards or by whatever name they may be called, the duties being in a large respect similar. It will also be noted that the personnel of these trustees have been to a large extent laymen. The question is therefore pertinent:

Why Trustees, and Why Laymen Trustees?

The answer is not hard to find if we but glance at the history and growth of government in America, and of the various governmental activities both of the nation and of the state. From the very first we had in our national government a Department of War and a Department of Navy, but early in the life of the nation it became the settled policy that the Secretary of War should not be an army man and the Secretary of Navy should not be a navy man. It was felt somehow that placing these departments in the control of laymen, so to speak, was conducive to the welfare of the nation and to the systematic growth and activity of each department. In our own state our institutions of higher learning

are conducted by a State Board of Control composed of five men (laymen) from five different parts of the state, not composed of five college professors or teachers. The Road Department, charged with the responsibility of the building and maintenance of our state highway system, is not composed of road builders or road engineers, but of laymen. The school boards of each county are ordinarily composed of laymen as distinguished from teachers or educators.

This governmental policy of investing the laymen with considerable administrative control of specialized activities is well intrenched in America, and because of its long existence must be founded upon and supported by what the public considers sufficient reason. Some of these reasons may be mentioned as follows:

(a) Where your hospital institution is supported wholly or in part by free-will contribution or where it is supported by a tax levy, the fact that the institution is in a large degree managed by laymen, individuals who are known to the rank and file of the public, and who in their daily and business lives are a part of the public, has a tendency to inspire confidence in the minds of the public.

(b) Because the management is considered as a part of the public, and because the members constituting the trustees or board are known to be familiar with the public need and public mind, such fact has a direct tendency to minimize complaint and fault finding on the part of the public.

(c) The idea intends to assure that business methods, tested and used by the individuals in their business affairs, will likewise be carried into the administrative affairs of the institution.

(d) If the board of trustees is composed of any considerable number of persons the ultra-radical views of some will be neutralized by the equally conservative views of others, and a more or less middle of the road course (very, very often found by experience to be the better) will result.

(e) The plan probably insures more internal harmony than if the hospital were managed by the medical experts. It may be true that experts and those individuals of specialized and intensive learning who must do the work inside the hospital can work much better "with" each other than they can "govern" each other. Let me say in this connection, however, that of our board of nine members, one is an active practicing member of the medical profession, which fact has, I feel, added both strength and understanding to our work.

I do not mean to suggest for a moment that the plan of trustees is a perfect plan—so far as I know nothing man-made is perfect; I do not mean that the plan does not have its faults. I do mean, however, that the plan when considered from every angle has in the public mind sufficiently demonstrated its worth to probably insure its perpetuation for many years to come.

The Responsibilities of the Trustees

The reasons "why" trustees necessarily suggests many of the "responsibilities" of trustees:

(a) They must of necessity exercise the most careful and conscientious care and judgment possible in selecting their superintendent and executives whom they charge with the responsibility of conducting the institution. This is indeed a grave responsibility. When, however, the trustees have used this great care and responsibility in choosing their executives, and in providing physicians who are considered competent, they have from a legal point of view ordinarily fulfilled their responsibility. This, without further amplification, would not be a sufficient statement from the legal point of view if we were discussing this matter before a crowd of lawyers because the cases contain many explanations and refinements of reasoning, but for the purposes of this occasion the statement is sufficient.

It has, however, been aptly and truthfully said that the individual who is, in all various respects, no better than the law requires him to be is in fact a poor citizen. And it may with equal truth be said that trustees who do no more than the law requires them to do are in fact poor trustees.

(b) The trustees must carefully and ably budget their expenditures. During the last several years the income of the hospital has decreased and the demand upon its services has increased. This fact makes the job of the trustees all the more difficult. They do not have sufficient funds with which to meet all the pressing needs. They must accept the grave responsibility of determining those services which can be wholly or partially furnished, and those services which for lack of funds must be wholly or partially left unfurnished.

(c) If the institution is supported wholly or in part by contributions it is very often the responsibility of the trustees to bring before the public each year its needs and necessities, and in every just way inspire generosity among those who support it. If the institution is supported by taxation it is the responsibility of the trustees to see that it is so operated and managed that public confidence is inspired and public needs met to the end that public approval is given. It is fundamental that if an institution supported by taxation loses public good-will and public approval, the public soon finds a quick and decisive way to stop taxes for that purpose.

(d) Without the good-will and the generous donation of services by the great and good members of the medical profession, hospitals of a public nature

simply could not approximate the services that are now rendered to the public. It is the trustees' responsibility to so harmonize the work and so conduct their institution that the medical profession continues to give generously of its valued time and services.

(e) It is the trustees' responsibility to at all times realize and remember that the institution for which they are trustees exists by reason of the great bond of humanity; that the individual patient is, after all is said and done, a human being; that such an individual is in both physical and mental distress and therefore should be treated with kindness and consideration.

I recognize and appreciate and want to pay tribute to those who spend their time at work inside the walls of these institutions. It seems to me that it takes a superman or a superwoman to do such work properly. So, feeling as I do, I should want to be first to overlook or condone any act where kindness may not for a moment predominate. These workers are dealing with humanity, not at its best, but with a humanity always impaired. Their hours are long and, as I have above suggested, to my mind it takes a superman or a superwoman to at all times perform the duty and service the way it should be performed. Nevertheless it is the trustees' responsibility to see to it that in so far as possible a spirit of kindness and sympathy and toleration pervades the institution. Regardless of how difficult at times it may be to exercise this spirit we must always keep in mind the couplet:

"So many faiths of diverse tests
So many creeds that wind and wind
When largely all this old world needs
Is but the art of being kind."

(f) Even when the trustees have at their command the advice and counsel of an excellent superintendent they must from time to time furnish to this superintendent the benefit of their counsel and their judgment, and help as far as possible in the solution of his perplexing and difficult problems.

The Service of the Trustee

Having touched upon the questions of "why" a trustee and "how" a trustee, let me in closing say a few words upon the question of "what" a trustee.

These hospitals of public and semi-public service furnish thereby one of society's concrete answers to the age-old question, "Am I my brother's keeper?", and the trustee is but an humble individual of the community who recognizes the vision of the public hospital and is willing to give a portion of his time and of his talents to the end that this vision be a definite reality.

Travelers are still journeying from Jerusalem to Jericho. They will continue to be set upon by "thieves and robbers"; not the literal thieves and robbers mentioned in the story of Holy Writ, but by conditions and circumstances, where in their suffering condition they require help which is beyond their ability or their resources to provide. Had no one passed the suffering man but the Priest and the Levite, this story would have never lived; it is because the Samaritan stopped and furnished aid and care that we have and will always have this story. The public or semi-public hospital must, if its trustees discharge their responsibilities, continue to be the good Samaritan. The trustees in the rendition of this service need not expect the public to bedeck their pathway with roses. The public, as a public, is all right, but it is composed of individual members and each of those individual members have before them the problems, the difficulties and the reverses incident to individual daily life. They do not have the time to know in detail what the trustees must know. They do not have the time nor the opportunity to know the work that the trustees must do. The trustees, if they have a correct appraisal of their position, must as their reward look to the approval of their own conscience and the satisfaction of having had their small part in a great service.

The immortalized village blacksmith was described as:

"Toiling, rejoicing, sorrowing,
Onward through life he goes,
Each morning sees some task begun
Each evening sees its close,
Something attempted, something done
Has earned a night's repose."

I have often thought that this description fits many as they journey down the pathway of life. It certainly has its application to the trustee. He toils because the work must be done; he rejoices because of the help and the aid he is rendering to those in need; he sorrows because he does not have the funds and the facilities with which to furnish and supply all the needs; and, if he has, faithfully discharged the responsibilities which his trust imposes he has earned "a night's repose."

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Monsignor Griffin Sails for World Cruise

The Rt. Rev. Msgr. Maurice F. Griffin, LL.D., vice-president of the Catholic Hospital Association, senior member of the Board of Trustees of the American Hospital Association, sailed on January 6 for a five months' world cruise. He will be the Catholic chaplain to a party of more than three hundred, assembled from all parts of the United States, sailing on the Steamer Franconia of the Cunard Line.

Needed Changes in the Nurses' Curriculum

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With the changing social and economic conditions of the present time and the upward trend in standards of education in general, nursing education in particular, hospitals are faced with the greatest crisis that has ever confronted them since the organizations of schools of nursing. The system which has placed upon the schools of nursing the dual responsibility of educating the students and providing nursing service for hospitals is, indeed, the seat of this trouble. The prime function of schools of nursing established in hospitals is the maintenance of a nursing service. The adequacy of this service has been questioned in the past two decades, and has been the occasion of critical analysis of nursing education. Educating the students and providing nursing service for the hospital is, then, the heart of the difficulty.

The writer is of the opinion that it is clear, to the majority of administrators of standardized hospitals, that the old system of apprenticeship *is obsolete;* that hospital administrators can no longer depend upon the students for the major care of the patients; that the work of the students must be supplemented by graduate service.

Students in schools of nursing are the only professional students who earn their own way, or the greater part of it, while their education is in progress. For this reason it is said to be profitable. This advantage has attracted great numbers to the field, with the result that the profession is overcrowded.

It must be kept in mind that in the old system the educational function of the school of nursing was *not always* predominant. Assignments to services were frequently based upon the exigencies of the hospital administration, and *not* on the educational needs of the students. But this paper is intended to be on "Needed Changes in the Nurses' Curriculum" and not on pointing out the deficiencies in that old system.

With the surveys that have been made by the Goldmark Committee and the Grading Committee, and the consequent proposed changes recommended when the revised curriculum is ready for use, it will, in all probability, meet all the needs of the educational department in the hospital.

Needed Changes in the Curriculum

In suggesting needed changes in the curriculum, the writer would first recommend a course in social sciences. Social teaching and social thinking will make the nurse ask herself, "How can I best serve the public?" The nurse has a right to superiority of preparation. The things nurses offer are vital to community welfare. Teach her to remember that the patient under her care is a *human being* and not merely a laboratory specimen or a *case* for her to work on. It should be kept in mind that, although the patient in the hospital is seen as an isolated unit, he is really only *temporarily* removed from the interdependent group of his fellows, upon whom he exerts a modifying influence, and who in their turn have helped to produce the person he is. Effective treatment of the present would, therefore, seem to rest upon understanding the influences of the past, and considering those of the future. This does not mean that less care and consideration should be given to the nursing ministrations; it simply adds to their value and effectiveness by giving a better understanding of fundamental purposes. According to MacIver, in "Society, Its Structure and Changes," "To understand things is to perceive their connectedness and thus their relation within some whole to which they all belong."

Training in Relationships Necessary

Nursing education stresses technical skills and the physical sciences, and rightly so, but it needs to place greater emphasis on the social content in the basic curriculum. This would seem to be the next step toward the type of nursing which an intensely socialized environment demands. The care of hospital patients is not, of itself, sufficient preparation for professional nursing. Nurses should be prepared, not only for the practice of a profession, but they should be *attuned to life*—to *all* life, and be able to make correlations and analyses which harmonize the hospital and their work with the world and its needs. No other standard will tend to raise the professional standing of the nurse so surely, as an earnest attempt to enrich the background of her training by introducing into the hospital curriculum a course, that will contribute to the social betterment and the general health and happiness of the community which she serves. This would mean the adjustment of her professional service to the needs of the present day, and adjustment of the individual. That implies a broader concept of nursing than the

mastery of technical skill and the carrying out of procedures in the bedside care of the sick. It implies an understanding of the social and economic conditions that have an important bearing on health. Nurse educators should give students an understanding and appreciation of all the factors which enter into the life and well-being of an individual and help him to reach his highest level of attainment. The nurse should be taught to recognize the fact that she, too, is a part of a social community with social obligations and needs, rather than an impersonal cog in a mechanized society.

This change in the curriculum will help the nurse to adjust to the situations of professional nursing. No one can ever adjust an individual, but she may be taught how to adjust, and teachers can help her in her adjustment. This change involves the setting up of standards of admission for those who are to follow this curriculum. In order to improve the quality of nursing service and to secure an approximate balance between supply and demand, the professional schools have raised their standards sharply. In comparing requirements and methods of selection of earlier schools with the requirements of today, one is tempted to pause and think that we have come a long way. But in this age of progress much is still to be attained. Nursing calls vigorously for young women with force of character, good breeding, intellectual capacity, and that subtle something, not measured by ordinary high school standards, not indicated by ordinary terms, which makes the ministrations of the accomplished nurse a blessing, as well as a necessity.

Better Scientific Training Imperative

The increasing complexity of medical procedure has made imperative a better scientific training for nurses. As to requirements in preliminary education, most schools have set their minimum standard at graduation from high school, but character fitness and personality tests are prescribed. Statistics show that many schools of nursing have gone on in advance of state regulations in regard to the matter of education. Graduation from high school itself is not sufficient evidence of one's fitness to enter the nursing profession. It is well known that not every student with an upper-third standing in her class in high school will prove to be an "A" student in a school of nursing; she may be lacking in motor control, in emotional control, and she may have personality traits, any of which may unfit her for the profession of nursing. In high school, learning requires mental ability—motor skill being rarely called into play. In a school of nursing, however, this is not true. The student must be able to make practical application of the knowledge she has gained in the classroom. This requires effort, deep thinking, and an alert, inquiring mind. She must be able to concentrate, apply to definite situations what she has been taught. She must often invent and improvise in cases of emergency. She will have to do more—she will have to study to understand her patient from a psychological point of view, learn how to adapt herself to other personalities—a feat not accomplished in a day, and *never* by one who has a very limited degree of intelligence.

Intelligence tests have been adopted in many schools and found to be of considerable assistance in the selection of students. Since nursing does require an unusual combination of intelligence, aptitude, character, and a real love for one's work, all these qualities must be sought in the applicants of today, if tomorrow they are to become co-workers in the community. They should be imbued with devotion for nursing, which is the dominant force of the profession.

Another need in the curriculum would be a comprehensive course of lectures in that form of psychology known as mental hygiene. This would mean a steadily increasing group of nurses who would remember that human beings have both mental and physical mechanisms, either of which may get out of order and react on the other.

Reorganization of Training Schools Is a Real Need

The most important thing in which a nurse should examine herself when she faces the wide field of nursing, is her own attitude of mind toward nursing, her own ideals of service. Therefore, she should be taught to be conscious of a sincere desire to be broadly helpful in her own sphere, to go where she is needed most, to play well her part in the drama of life. She should be trained to recognize her obligations and adapt herself to guiding principles which have been given her to help her make the most of her life, and to yield the greatest possible sum of happiness to others. These are a few of the needed changes in the curriculum. Allowing that the curriculum is ideal, that it covers all these "needs" and more; granted that great care has been manifested in the selection of students and the highest type of young womanhood chosen; allowing also that the hospital is furnished with all the modern equipment available, together with adequate clinical material in a well-balanced distribution of patients, and properly segregated services; the nurses will not be adequately trained if they haven't an adequate staff of teachers. This means reorganization of the schools of nursing connected with hospitals. Here lies the heart of the difficulty.

Reorganization is the real need. The day is gone when the nurse pays for her education by the service she renders the hospital in the care of its patients. This transition cannot be made at once. In a few

instances it has been made. The old system will gradually disappear and the result will be fewer and better qualified students. The educational program would not be limited by the hospital needs. The students' hours of duty would be shortened, they would have almost an entirely academic year in the freshman year, with but one or two hours' nursing practice a day. The nursing care of patients will always be an important part of the education of the nurse and consequently there will be need for a close relationship with the patients in the hospital in order that students may secure this essential experience. But the hospital can no longer depend upon the student nurses for the nursing service. The work of the junior and senior classes would have to be supplemented by graduate service as head nurses, supervisors and instructors. During their two-hour period in the wards, the work of the freshmen would have to be supervised by the instructors in principles and practices as follow-up work, after procedures had been demonstrated in the classroom. The juniors would be given direction and assistance in their cases studies, each student to write up her cases every day and be allowed to follow certain cases straight through and write up the daily progress. The students would have conferences with their director of case studies, and once a week the class would meet for round table discussion with their director.

The tendency toward the splitting up of functions and the specialization of different workers has proceeded rapidly in recent years, stimulated by the expansion of modern hospitals, the development of new methods of diagnosis and treatment, and advances in nursing education. This expansion of hospitals has multiplied the duties within the nursing service and necessitated the splitting up of the work of nursing administration and the development of more highly specialized workers, new workers being added who are primarily concerned not with the nursing service but with the teaching or with school administration. There should be a complete set-up for the nursing service with a nursing school organization running parallel with it and overlapping it, especially in the division of clinical teaching. This would necessitate the building up of a school faculty to keep these two divisions functioning properly and keep them clearly differentiated. In the majority of cases at present the faculty is a shadowy double of the nursing staff and the staff doctors. Here permit me to state that it is not fair to ask a busy doctor to come in the evening to lecture to nurses because it doesn't cost anything—there should be paid professors to do this work—nor is it right to keep the nurses in a classroom at night after they have been on ward duty during the day. Classes should be given regularly and at seasonable hours, and not just any time the doctor could give the time.

The School of Nursing as an Educational Department

The school of nursing should be recognized as an educational department which undertakes to give students training calculated to meet the needs of their future potential patients as well as for the immediate patients in the hospital. Since educational qualifications on a college level is required of students, as it is in most of the standardized schools of nursing, the students should be given college work. The training of nurses is a serious business, which must be attacked by those interested primarily in nursing education. The old system has been weighed in the balance and found wanting, and out of recognition of its inadequacy has come the expression of need for a new type of education which will correct some of the weaknesses of the old system.

Obviously if the school is to be more than a phantom it needs a corporate body of its own to carry on its work. There is no objection to some of the members of the school faculty filling dual positions if the rights of the school in such cases are safeguarded. In the clinical branches, such as pediatrics, for example, it is desirable that the instructor who is responsible for the teaching should have direct supervision also of pediatric nursing practice in the hospital. In one hospital the medical technologist in the pathological laboratory who has an M.S. degree teaches the chemistry experiments to the students assisted by her technicians. In this particular school of nursing the faculty consists of the dean of the school of nursing, the assistant dean, who is also the superintendent of the hospital, the president of the college with which the school is affiliated, the director of nurses, the educational director, the science teachers, of which there are three, the teacher of principles and practices and her assistant, the record-keeper—one who has charge of all the extra curricular activities with assistants for glee club, athletics, etc.—besides lay professors who give parliamentary procedure, public health movements, Red Cross, first aid, etc. In this particular school the entire staff, with one or two exceptions, the orthopedic surgeon and the E. E. N. & T. man, are paid professors. It is not within the scope of this paper to solve the problems of how all this may be done. Suffice it to say that it *has* been done, and it remains for hospital heads who have schools of nursing to reorganize them if they have not already done so.

To summarize the "Needed Changes in the Nursing Curriculum":

The incorporation of the social sciences into the

school curriculum and a course in mental hygiene are much needed changes, and that, while the reorganizing of the school is not strictly speaking a curriculum revision, it will do much to carry out the new curriculum which is being prepared by the curriculum revision committee and which is looked forward to so eagerly by all nurse educators.

Every right-thinking superintendent of a hospital wants the patrons to be satisfied. Since the prime reason for the existence of the hospital is for the best possible care of the patient, heads of hospitals should see to it that the very best nursing service obtainable shall be given to him. What they sometimes do not realize is that the caliber of the nursing service, more than anything else, determines whether the patient is going to be satisfied or not. Therefore, they should look into it and see if their school of nursing needs reorganization and should readily adopt some of the measures to improve the nursing service if it is now inadequate.

The Tuberculosis Survey of the American Medical Association

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THE SURVEY of Tuberculosis Hospitals and Sanatoriums of the American Medical Association (*Journal of the American Medical Association*, December 7, 1935) is the most extensive study of our tuberculosis institutions as yet undertaken and published. It is a veritable storehouse of data pertaining to the management and administration of our vast tuberculosis hospitalization machinery. As a source of reference it will be indispensable because it gives a comprehensive picture of all the diverse phases of sanatorium administration. By this publication, the American Medical Association has certainly indebted everyone interested in the management of our tuberculosis institutions.

The fact that 98.9 per cent of the sanatorium directors and 92.5 per cent of the tuberculosis department heads have returned a most accurately filled out comprehensive questionnaire, on which this survey was partly based, shows the extent of interest of the hospital field in, and its respect towards the work of the Council of Hospitals and Medical Education of the American Medical Association.

Standardization Is Desirable

It is expressively stated that "the purpose of the survey was not to standardize the tuberculosis hospitals." Remembering the great benefit which the medical profession, and more so the general public, derived from the standardization of the medical schools, this limitation in the scope of the survey is certainly to be regretted. The fact that these institutions represent an investment of approximately $328,937,777.36 and that their maintenance cost amounts to over $70,000,000 annually, shows the extensive financial investments alone, the public has at stake.

How Standardization Would Serve

Standardization would serve at least a two-fold purpose.

1. It would uphold and support the activities of those institutional administrators who strive to conduct their institutions at decent medical standards.

One still not unfrequently finds such institutions obviously demand greater financial expenditures than those of the old boardinghouse type. And yet, the tax paying public cannot always understand why the maintenance of one institution is considerable more expensive than of another of similar type in a neighboring community. Administrators, harassed by ignorant political governing bodies and the uninformed tax paying public, are often in need of every authoritative support they can marshal, in order that they may maintain their institutions in accordance with present day medical knowledge.

2. Standardization would be greatly instrumental in bringing about a much desired and needed improvement in the facilities of the poorly conducted institutions and advance the care of their patients.

The time has long passed when communities can remain satisfied by providing only food, shelter, and domiciliary care for the tuberculous. Institutions conducted on poor professional standards maintain a false security in the public and lead them to believe that the tuberculous are properly cared for, when in reality they often jeopardize the health of their wards. While the laws and statutes which provide for the erection of tuberculosis sanatoria never specify the standards on which these institutions have to be conducted, the tax paying public is left to chance that it will receive value for the money it spends on the eradication of tuberculosis.

It is of significance that twenty-eight per cent of the 471 sanatoria have less than 50 beds, twenty-eight per cent have a capacity of 50-90 beds and the remaining forty-four per cent 100 beds and over.

Whether small institutions, especially those of less than 50 bed capacity, can economically provide that care of the patients which present day medical knowledge demands, can be seriously questioned. In these institutions the overhead expense, if personnel of proper qualifications is employed, could easily take care of a doubled or trebled patient population.

The Per Capita Cost of Construction and Equipment

In this connection it is of significance that "the sanatorium of less than 25 beds average $1,988 per bed, those of 25 to 49 beds $2,298, the institutions of from 50 to 99 beds average $2,745 and the sanatoriums of 100 beds or over represent a valuation of $3,498 per bed." Such a difference in cost per bed is certainly in contradiction with every day economical experiences in other fields. One would naturally expect that the larger the institution the lower the cost per bed. Disregarding the highest valuation of $3,498 per bed in the large institutions, which might be explained partly by the high construction cost of $10,000 per bed and the highest of $13,043 per bed of some new institutions, against which the survey takes a justified stand, there is still a difference of thirty-eight per cent in the cost of bed in the smallest versus the middle-sized institutions. This difference surely cannot be explained by other factors except the poorer and more limited construction and therewith the poorer usefulness of the small institutions.

The practicability of the various sized institutions is of paramount importance, because many of the states delegate the maintenance of tuberculosis sanatoria to the counties or municipalities. Now, many of the counties have such a small population that they are in need of only a very small institution, which cannot be conducted economically on decent professional standards. In such instances it would be of the greatest interest to the tax paying public and the tuberculous, should a number of these counties join in the maintenance of an adequate sized institution for a larger territory.

The Quality of Medical Service

The survey justly emphasizes the fact that "the quality of medical service depends on the competence of the medical staff. For this reason it is essential that the medical personnel be selected on the basis of training and experience." It would be of equal importance to consider that the value of even the best man is restricted if the time he devotes to an institution is unduly limited. Yet only 273 institutions, 57.95 per cent, employ a full time medical director, 178, 37.79 per cent, a part time, and 20, 4.26 per cent, and these are all private institutions, have no medical director.

Only 318, 67.51 per cent, of the sanatoria have a full time medical staff. It would seem that in the remaining 153, 32.49 per cent, the patients are not fully covered for emergency situations which might arise at any time of the day or night and call for immediate medical attention. This situation is more serious when it is considered that 120 sanatoria of the 318, 37.73 per cent, have only one physician on full time duty.

The Nursing Service

Concerning the nursing staff it is significant that, as a group, only the Federal institutions employ graduate nurses exclusively. The remaining 453 civilian sanatoria employ 7033 nurses of whom 3928, or 55.85 per cent, are graduates; 538, or 7.64 per cent, students; 140, or 1.99 per cent, affiliates, and the remaining 2427, 34.50 per cent or a little over one-third, practical nurses. As long as proper nursing care is essential for the welfare of the patients, it would seem that practical nurses should be eliminated from medical institutions.

Of the 471 only 406 sanatoria, 86.2 per cent, have facilities for pneumothorax treatment. It is of interest to note that 53 of these institutions did not report any such treatments during the year of 1934. This number must be further reduced because 33 of the institutions reporting facilities for collapse therapy and actual numbers of such treatments administered, report no facilities for fluoroscopy. The administration of pneumothorax treatment without fluoroscopic control, however, is generally conceded as a dangerous procedure. It may be assumed, therefore, that pneumothorax treatment is properly and actually utilized only in 320, 67.94 per cent, of the sanatoria. Yet, pneumothorax treatment is the most effective weapon at our disposal in the treatment of tuberculosis.

The Laboratory Service

While it is generally acknowledged that roentgenographic studies and sputum examinations are indispensable in the treatment of tuberculosis, in practice we find that only 364, 77 per cent, of the sanatoria have roentgenographic equipment and only 346, 73.46 per cent, facilities for sputum examinations. It might be assumed, therefore, that in a fair number (around one-fourth) of these institutions there is considerable room for improvement in providing them with essential facilities for the proper care of their patients.

The report justly emphasizes that "necropsy performance in hospitals has come to be considered an indication of the scientific attitude of the medical staff." Perhaps no other single factor is as characteristic of this scientific approach as the earnestness by which post mortem examinations are pursued. True there is a great need for further education of the public. But once the public will realize that the medical institutions in which necropsies have become a routine procedure also utilize in the treatment of their patients the advanced achievements of medical knowledge, the present reluctance to autopsies, is bound to disappear. The fact that the municipal sanatoria had a necropsy rate of thirty-seven per cent, indicates the high medical standards of these institutions as a group.

The Daily Per Capita Cost

The daily per capita cost is of paramount importance to every hospital administrator. It is a bugaboo to those whose governing bodies look only on the debit side of the ledger and forget that values cannot be received unless the wherewithals are furnished to produce them. On the other hand administrators who manage their institutions on a penny-wise economy basis can and do use the per capita cost as a convenient cloak behind which to hide the neglect of decent professional standards.

It is amazing to see the wide variation of the per capita cost, from $0.50 to $6.74, a difference of 1348 per cent between the lowest and the highest. One greatly wonders what attention in general can an institution furnish for 50 cents a day, not considering even professional standards. The comparison of the per capita cost of the various institutions is of no use, because the professional standards of these institutions cannot be compared.

The factors entering into the determination of the per capita cost are numerous: the decency of wages and salaries paid the personnel, the adequacy of the ratio of the personnel to the number of patients, the quality and quantity of the food served, the professional qualifications of the personnel (graduate nurses for instance), the medical equipment of the institution, the size of the institution (institutions with a large bed capacity buying their supplies by the carloads have a distinct edge over the smaller institutions in purchasing), to mention only a few.

As yet no method has been worked out by which cognizance of these factors would be taken in the daily per capita cost. Under these conditions the per capita cost is a poor yardstick by which to compare the various institutions from an economical point of view. True economy, it must be remembered, finds expression not in the amount of money spent, but in the quality of values received. Poorly conducted institutions in which the patients do not receive the maximum benefit which up to date medical knowledge has to offer, are a liability to the community instead of an asset, no matter how little money they spend. When human lives are lost because facilities are lacking for the restoration of health, thrift becomes a curse instead of a virtue. The purpose of maintaining medical institutions from community resources is to restore health to the individual citizen and to prevent the spread of disease to other members of the community. Economy in hospital administration must be judged by the fact how well the institution serves this purpose and how economically it achieves this goal.

Through its Committee on Administrative Practice, the American Public Health Association was able to develop a yardstick in the per capita cost of public health. Such a yardstick of per capita cost per day for the various institutions in the hospital field is urgently needed. The conscientious hospital administrator has no way to compare his cost with those of others as long as the per capita cost of the various institutions is not comparable, because each one uses different professional standards in rendering their services. When one of the leading national organizations, be it the American Medical Association, the National Tuberculosis or Sanatorium Association, or the American Hospital Association will work out a method by which the daily per capita costs can be intelligently compared, we will make a great step forward in the economical evaluation of hospital services.

Such a yardstick is of more than academic interest as long as a progressive hospital administrators rendering excellent professional services are harassed by their governing boards on account of high per capita costs, and poorly conducted institutions are tolerated and encouraged by a misinformed public, because their maintenance cost is cheap.

As a step toward the establishment of such a yardstick in the tuberculosis field could easily be made, we believe, would the Council on Medical Education and Hospitals compute the daily per capita cost of those institutions it has approved for residencies. These institutions have proven that they comply with definite medical standards. It would be of great value to learn what price they pay for the services they render.

It is to be hoped and expected that the survey of the American Medical Association will strengthen the hands of those administrators who conduct their institutions to the credit of their profession and spur on the others who are handicapped by financial considerations to elevate the standards of their sanatoria so that they may render the fullest service.

A Community Program for the Care of the Chronic Sick

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ALTHOUGH chronic illness is an increasing cause of disability and death, the needs of the chronic sick have not been met in any community in this country. Experience has shown that in a large city the chronically ill receive grossly insufficient care, if they are casually fitted into the existing hospital and institutional framework. Special planning and special facilities are needed to meet their requirements.

Recent Surveys of the Chronic Sick

Recent surveys in Massachusetts and in New York City show that one out of ten in the population, and nearly one in three of those over forty years of age, is suffering from some chronic disease. In 1870 chronic diseases caused only one-fifteenth of all recorded deaths, but today they account for more than half of the total mortality. They are not confined to the elderly and aged. In the New York City census of 21,000 sufferers from chronic disease, one-third were under sixteen years of age, one-fifth were in the age groups sixteen to forty, one-half were under forty-five, and only one-fifth were seventy years or over.

Among the most important of the chronic diseases that cause this great volume of invalidity are: Orthopedic disorders such as the after effects of poliomyelitis, tuberculous disease of the bones and joints, diseases of the heart and arteries, neurological disorders, chronic rheumatoid arthritis, cancer, and diabetes mellitus.

In most acute diseases medical considerations are paramount. In chronic diseases the medical, social, and economic elements are inextricably interwoven and of equal significance. Such matters as financial support, altered living conditions and care of children are often as fundamental for the welfare of the patient as medical treatment. His attitude toward his illness and the attitude of members of his family toward him are also factors in his care.

Ill health is the major cause of financial dependency at all age periods. The treatment of a severe diabetic theoretically may be very simple, but if the home is so poor, or the family so unintelligent that proper dietary measures cannot be carried out, or if the patient is unable to buy insulin, treatment becomes impossible. Patients with heart disease who are on the borderline of heart failure, and who require close supervision, intelligent medication, regulation of diet, and physical activity are notoriously difficult to handle among the poor. It is the usual story for such patients to be restored to compensation in a hospital, and to return repeatedly after a few weeks' or months' stay at home.

Special provision has been made for two forms of chronic disease, tuberculosis and insanity. Years ago victims of these diseases were shunted into almshouses and into other unsuitable institutions. But gradually as the social conscience developed, and knowledge of disease grew, special hospitals for the insane and for the tuberculous were built and maintained by public authorities. The original motive was self-protection against diseases that were considered a public menace; time has shown that the inevitable destitution that follows in their wake makes the care of subjects of tuberculosis and mental diseases a public responsibility. At first mere boarding homes, that gave domiciliary care were considered sufficient, but now we have well equipped and ably staffed hospitals with associated custodial wards. As the institutions improved, and as opportunities for study became better developed, due to the grouping of cases and increased facilities, their work and their interest began to reach beyond the treatment of the individual sick, to the broader problems of attempting to prevent these diseases.

The Present Inadequate Provisions for the Care of the Sick

For the undifferentiated mass of the chronic sick no such facilities for medical care or scientific study, no such determined effort to relieve and prevent illness exist. The care of the chronic sick is still in the almshouse stage. The majority are shuttled from pillar to post without any attempt at constructive care or rehabilitation. They seek refuge wherever they can gain admittance. We find them scattered in every conceivable type of institution, many of which are ill suited to their care. Homes for the aged, homes for incurables, general hospitals, special hospitals, convalescent homes all harbor them, but rarely meet their needs.

Read at annual meeting of Health Division, Council of Social Agencies of Chicago, Nov. 5, 1935.

There are many possible methods of providing for the chronic sick. The resources that may be mobilized for their care vary with the size, complexity, and traditions of a particular community. In large cities, the great number who are public charges, and the extent of the hospital system make it imperative that we first consider the best use of existing facilities and then the creation of additional resources.

Classification of Patients

The way to begin is by classifying patients according to the type of care needed as:

Class A Patients requiring intensive medical care for diagnosis and treatment

Class B Patients requiring chiefly skilled nursing care

Class C Patients requiring only custodial or domiciliary care

Patients in Classes A and B need care in a hospital. Patients in Class C need little beyond room and board, assistance in dressing, bathing, and eating, and special provision for occupation and diversion. Under suitable conditions they may be cared for in their homes, in nursing homes, or in the so-called homes for incurables.

Chronic diseases are so manifold in their causes and manifestations, they occur at all ages from childhood to senescence, they involve such a variety of factors as medical care, social adjustment, economic assistance, occupational rehabilitation that a community program for their care must be drawn on the broadest lines.

Many of the chronic sick belong in the ward of the *general hospital*. It is only when study of their illness in the general hospital reveals that they will need permanent or prolonged hospital or custodial care that they should be transferred to a special institution. For prolonged observation and treatment chronic patients should not be distributed among general hospitals. In a year four chronic patients may occupy one bed which otherwise would accommodate twenty-five acute patients. Placing the chronic sick in a separate institution would save daily costs, provide better care, and release many acute beds for which there is a great demand.

The Role of the Out-Patient Clinics

The role of *out-patient clinics* in the care of the chronic sick has never been studied, although they handle a large volume of these patients. In special classes, as in those devoted to heart diseases, gastro-intestinal disorders, arthritis, syphilis, and diabetes medical care is on a rising level of excellence, but in general classes it is haphazard and opportunist. Even in the best organized special clinics little thought is given to the relationship between clinic care and that offered by other agencies in the community. One of the chief lacks is adequate medical social service. The formation of special clinics for particular diseases must be encouraged and associations of special clinics fostered. This should lead to improved standards and methods and to study of community needs arising from the particular disease they are treating, and the aspects of this, that can best be handled by the clinic.

In any large city *special institutions* for the care of the chronic sick must be established. It is unwise to subordinate a division for the chronic sick to the administration of a general hospital. The needs of the acutely ill are so exigent, the problems of a general hospital so diversified and so pressing that the chronic sick harbored in such a hospital, whether segregated or not, are relegated to second place. Invariably in periods of stress, the chronic sick suffer

and are exploited for the benefit of those acutely ill. An institution for the chronic sick must be an independent administrative unit to enable it to do full justice to its patients, as well as to encourage it continuously to intensify and improve its service.

Planning for the Chronic Sick

The first essential in planning for the chronic sick is to designate a group of institutions as comprising the chronic service, and to place them, as far as medical policy and administration are concerned, under the charge of one medical superintendent. A completely equipped and staffed *hospital for chronic diseases* must be the nucleus for this service. The efficiency and excellence of the whole plan depends on the standards set by this hospital. Proper care of the chronic sick can be obtained only by establishing large institutions with equipment and resources for routine and special study sufficient to attract and maintain the interest of able men. Such a hospital properly organized affords rich and varied clinical material for teaching. Affiliation with a medical school is of value both to the hospital and to the school. Just as the chronic hospital will be the leaven for the whole chronic service, so the hospital itself needs the stimulus of a research unit, no matter how small. No hospital, acute or chronic, can function well without the spirit of research. So important is this that in New York, Dr. Goldwater has included in the budget for the coming year an appropriation for a research laboratory for the chronic service, although the hospital for chronic diseases itself has not yet been started. Such studies of chronic disease are of direct advantage to the taxpayers, most of whom themselves will succumb to some chronic illness.

The Essentials for a Hospital for Chronic Diseases

A hospital for chronic diseases does not differ essentially from a general hospital in the services it must supply. The idea that a make-shift adaptation of buildings unsuited to the acutely ill will provide satisfactory accommodations for the chronic sick is incorrect. It must have isolation rooms, utility rooms, and floor pantries. Complete dietetic, operating room, laboratory, and X-ray service must be provided. Departments of physiotherapy and occupational therapy must be well developed.

The nursing needs of the chronic sick in a hospital are almost as great as those of the acutely ill because so many of these patients are helpless and must be kept clean and fed. Less highly specialized nursing is probably required, and to a certain extent attendants may be used under proper supervision of an adequate number of graduate nurses.

The resident and intern staff need not be as large as in a general hospital of the same size because of the slower turnover of patients. The staff must give the same intensive care to patients and keep as careful clinical records as in a general hospital. Attending physicians must include representatives of all the specialties. Regular visiting must be demanded.

Six clinical divisions should be established: Medical, neurological, cancer, surgical, orthopedic, and children's.

Since every patient must be studied and a large proportion assisted by social service, more intensive medical social case work is required in a hospital for chronic diseases than in a general hospital. Economy for taxpayers depends to a great extent upon social service that can develop the patient's own resources, employ available community resources in his behalf, and reduce as far as possible his disability and dependency by constructive case work methods.

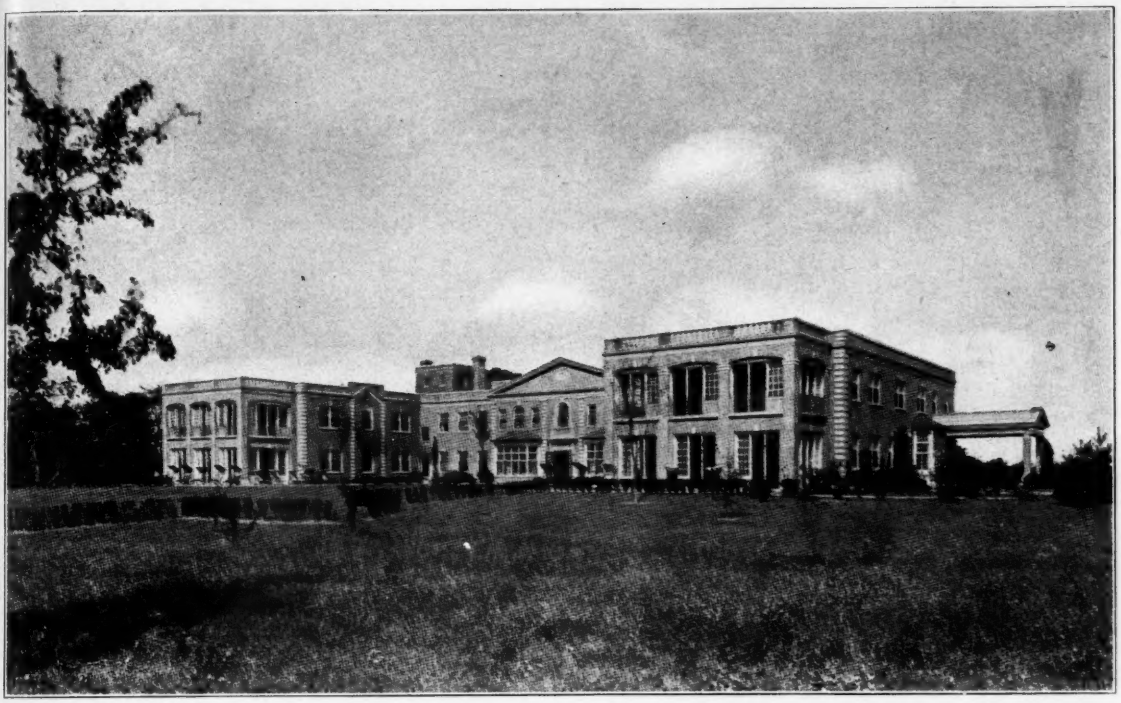
Respect for the individuality of patients must be emphasized in a hospital for chronic diseases. Because of the long periods of stay in the institution well-planned efforts must be made to meet their social, intellectual, and spiritual needs. (Occupational therapy, radios, libraries, and entertainments.) Facilities for privacy are essential. Individual lockers for personal belongings should be provided. Women, as a rule, need more privacy than men.

Proper Sorting of Patients Necessary

Proper sorting of patients is the basis of successful administration of a large service for the chronic sick. Every patient seeking admission to one of the institutions comprising the chronic unit, including the aged and the blind, should first be admitted to the hospital, where his medical needs should be determined. At the same time, a qualified social worker should study his economic and family background to determine whether institutional or home care would be most suitable. The time to arrange for home care is before the patient has become "institutionalized" and before his family has learned to dodge its responsibility.

Admission units should be provided where these patients will receive preliminary medical and social study, and from which they will then be transferred to the appropriate section of the chronic unit. A cubicle system in the admission unit is desirable for segregating patients. Admissions represent such a variety of diseases, of ages, and of social origins that preliminary adjustment of the patient will be greatly facilitated by providing cubicles.

The hospital for chronic diseases should be supplemented by a *custodial unit*. There should be three custodial beds for each hospital bed. In the custodial unit the problem is not one of supplying medical care, but of providing a decent home, for



The Avery Convalescent Hospital, Bridgeport, Connecticut

most of the patients transferred to this unit will remain there for the rest of their lives. At least a minimum of privacy and facilities for rest during the day should be assured. Buildings should be planned to enable the crippled to get to sitting rooms, dining rooms, out-of-doors, central workshops, and the like. There should be ample space for wheel-chairs, occupation, and diversion.

Large barrack-like wards, in which the patient has nothing but a bed, and to which he has access only at night, are unsuitable. These patients should be housed in rooms with not more than six beds. Each patient should have as a minimum a bed, a table, a chair, and a locker. His room, or his bed, is his home to him and he should have access to it at all times of day.

Crippled patients should not be housed above the first floor when there are no elevators for their use.

The Custodial Group

The custodial group need no medical care if the sorting of patients is properly carried out. It will probably be best to group custodial patients according to their diseases, in conformity with the main divisions of the hospital. This will permit more continuity of treatment and medical supervision, for transfer between hospital and custodial section and vice versa will be frequent. No clinical records should be kept in the custodial section. Suitable cases may be selected for follow-up by any division of the hospital; records of such follow-up being added to the original hospital chart. Annual or bi-annual health examinations should be instituted; experience in several homes for the aged has demonstrated their value.

The hospital and custodial unit should not, like the old-fashioned poor farm, or almshouse, be in some inaccessible, out of the way location. With much sickness and high mortality it is a hardship both on the patient and his family if visiting is made too difficult by reason of inaccessible location. Moreover, if the institution is too far from the center of town it will be difficult to obtain frequent and regular visits from a competent medical staff.

The hospital for chronic diseases should conduct an *out-patient clinic* for follow-up treatment of selected discharged patients. Such follow-up is essential for both teaching and investigation. For certain types of patients, or of diseases, the clinic will supply necessary continuity of treatment and observation in a program of hospital care alternating with residence at home.

The Domiciliary Group

Persons disabled by a chronic disease that has become inactive can be cared for in any *domiciliary institution.* This group does not need expert medical attention. Many of them are homeless. Poverty added to their physical handicaps has made it impossible for them to survive in the community. This

group, and this alone may appropriately be received in institutions that still have the bad taste to call themselves Homes for Incurables. *Private nursing-homes* can be paid to shelter them. Proper sorting and selection of patients is the first essential of successful use of nursing-homes. Only patients who have first been studied in a hospital for chronic diseases should be eligible for this type of care. The second essential is competent supervision of standards of service in nursing-homes. Immediate transfer of the patient to the chronic hospital must be provided in case his illness again flares up.

Homes for the aged should admit many elderly individuals disabled by disease. Growing appreciation that the aged who can be "up and about" prefer to remain in their own homes, and increasing provision of old age pensions should result in fewer able-bodied aged gaining admittance to these institutions. Their beds should be allocated to those who because of disease or injury are unable to tend to their physical needs and who require domiciliary institutional care. In New York the aged homes are very slowly learning this elementary lesson, and for the first time are beginning to relate their activities to the needs of the community as a whole.

Home Care for the Chronic Sick

The care of the *chronic sick in their own homes* should form an important part of a community program. One of the first principles of child welfare is that a child shall not be deprived of family life by reasons of poverty alone. There is a growing consciousness that the adult removed from active life by illness should not be forced to bear the added burden of separation from his family and associates and be segregated among other sufferers in a remote institution for economic reasons alone. Many chronic invalids could remain in their own homes for many years or for the rest of their lives, if a stipend and an occasional visit from a doctor were supplied —a provision which is not only the most humane and the one invalids prefer, but which is also more economical than institutional care.

This type of patient is not burdened primarily by the need for medical care. He seeks help because the family budget cannot support an unproductive member, far less minister to his simple needs.

However, plans for home care of the chronic sick can be but temporary makeshifts until such time as a comprehensive scheme of invalidity insurance is adopted. Such schemes are included in social services in most European countries where they are combined with old age insurance, except that in Great Britain it is part of the health insurance system.

The chronic sick are neglected in programs of *home nursing care* and *home medical care* provided by visiting nurse organizations and by physicians paid for visiting homes of needy or "relief" individuals who become ill. The heavy load of acute cases carried by the visiting nurse associations, and the fact that service of physicians to the indigent sick is limited to a maximum number of visits, restrict the use of these services for chronics. Often home medical care is administered by some other agency than as part of the municipal hospital and out-patient system. The weight of opinion would place home medical service under the municipal hospital department. Under such an arrangement there would be maximum flexibility in changing the status of the patient from hospital to home care, or from home care to hospital or clinic without interruption of the medical and social program.

Centralized Responsibility and Supervision Necessary

With the centralized responsibility and supervision under such a system medical standards could be maintained, standards of practice defined, policies of hospital and home care harmonized, adequate records kept, and nursing and social services coordinated. The frequent need for diagnostic facilities for patients receiving home care, and the necessity for careful selection of such patients, are additional reasons why this service should function under the municipal department of hospitals.

It is still an open question whether physicians giving home medical care should be drawn from a panel and paid by the visit, or whether they should be engaged on a full-time or a part-time salaried basis. The panel system appears to be better than a system of full-time salaried city physicians. The *chief defect of a* panel system is lack of medical supervision. A system of part-time physicians serving the sick poor in dispensaries and in their own homes seems to be better than either the full-time salaried physician or the panel system. Physicians working in the out-patient departments without remuneration carry a vast volume of medical service to the poor for which the community should pay. In return for annual stipends these dispensary physicians could attend a certain number of out-patient classes a week, and at the same time be given a certain case load of home medical visits. The city could be districted according to the geographic location of its hospitals and dispensaries to facilitate the scheme. The system, supervised by the hospital authorities, would provide an integrated program of hospital, clinic, and home medical care with remuneration to the doctors who perform this work.

In planning nursing service for the home care of chronic patients, the first question is whether a special department should be operated under

municipal auspices or whether the service should be bought from the voluntary nursing organizations already in the field. Comparatively few of the patients recommended for home care will require highly skilled nursing. The majority will need care that can be given by a trained attendant under the supervision of a trained nurse. There have been many attempts to provide this type of nursing service, but it is still a problem. The National Organization for Public Health Nursing advises that where the nursing of chronics is an appreciable part of an agency's program, it should use such attendants. In addition to personal attention required by the patient which a practical nurse or attendant may supply, there are those who require help with household tasks that they are unable to perform. In such cases, the visiting houseworker is needed.

In view of the fact that chronic diseases all involve to an equal degree medical, social, and economic factors, the care of the chronic sick must be built around a nucleus of adequate social service, as well as adequate medical and nursing service. The special facilities required for patients are determined as much by their social as by their medical needs, and the proper allocation of patients depends as much upon the judgment of the trained social worker as upon that of the physician.

We have briefly reviewed the main points of a community program for the care of the chronic sick. How can such a program be put into effect? How can the inert and hesitant wheels of municipal service to the sick be made to move slowly in the right direction? There must be a central and representative group that undertakes to educate the public, the professional groups, and the responsible municipal authorities. In New York City the Committee on Chronic Illness of the Welfare Council has been working along the following program:

1. To create through public education new attitudes toward chronic illness and to make the public conscious that there is such a problem and that it can be approached in a reasonable way.
2. To fix responsibility for the care of the dependent chronically ill upon the city government, including provision for adequate hospital care, institutional care of the custodial type, and home care.
3. To seek a definition of policies and responsibilities in regard to the chronic sick by the voluntary agencies with a view to more effective use and development of their facilities.
4. To bring about in certain fields of chronic disease that are not already organized more adequate coordination and development of services for prevention and care of illness.
5. To offer consultation service to agencies or groups of agencies in the Welfare Council on problems connected with the prevention and care of chronic illness.

Some similar plan must be worked out in other communities. The Council of Social Agencies might well undertake this task in any city. The problem looks very formidable but the times are propitious. there is an ever growing interest in the chronic sick. A 1500-bed modern hospital for chronic diseases on Welfare Island in New York City is to be constructed in the immediate future. If the medieval unsavory barracks on New York's Welfare Island can give place to a modern hospital for chronic diseases, so can the inertia and disinterest in other communities be overcome.

To the Holders of the Bonds of The American Hospital Association

The American Hospital Association has on deposit in the Amortization fund for the purchase of the 6% First Mortgage Bonds of the Association—the sum of $3,200. There is available $1,200 for the purchase of the General Mortgage 6% bonds.

The Association will be glad to purchase bonds of either the General Mortgage or First Mortgage issue at par and accrued interest. Holders of bonds of either of the issues, who may desire to dispose of them, may do so by sending them to Mr. Asa S. Bacon, Treasurer of the Association, and check to cover will be sent forward immediately.

Of the General Mortgage issue, there are outstanding $22,600.00 of which the Association owns $2,700.00 and of the First Mortgage issue $24,700.00.

The total bonded indebtedness of the Association is $47,300.00 of which the Association owns $2,700.00. Leaving the net capital indebtedness of the Association of $44,600.00 as of January 15. Against this indebtedness the Association has to apply $3,200 in the Amortization Fund for the First Mortgage bonds and $1,200 in the fund for the purchase and retirement of the General Mortgage bonds. The General Mortgage bonds expire in 1946. The First Mortgage bonds in 1947.

Nursing Schools and Hospitals

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THE FINAL REPORT of the Committee on the Grading of Nursing Schools, entitled "Nursing Schools Today and Tomorrow?" is the culmination of a study which extended over eight years, conducted by men and women of position and experience who were sincerely interested in the present and future of nursing schools. It is a book every hospital superintendent should read because the operation of hospitals is impossible without nurses and, consequently, as hospital superintendents we are all, of necessity, vitally interested in the education of nurses.

The Problem Is Both Local and National

The problem of nursing schools is at once a local and a national problem; local because each hospital must determine whether it is to conduct a nursing school, and if so what kind of a school and how; and national because educational policies which will be applicable to all nursing schools and all nurses should be formed.

In the United States nursing schools began in 1873. In 1934 there were 1472 nursing schools; two per cent of these schools are controlled by universities, the remainder by hospitals; twenty-five per cent of these hospitals averaged from 8 to 42 patients, fifty per cent less than 75 patients; only thirty-eight per cent had more than 100 patients. One-quarter of these schools had from 3 to26 students, three-fourths had 71 or less; only twelve per cent had more than 100 students. The average was 43.

In 1873 there was one trained nurse in the United States. In 1930 there were 294,189. Each year 25,000 new trained nurses are graduated. There is one trained nurse for every 416 persons in the United States, varying from 1 to every 169 persons in the District of Columbia to 1 for every 1240 persons in Mississippi. The Committee on the Cost of Medical Care estimates that a reasonable ratio should be one nurse for every 2272 persons. There is no state licensing of nursing schools. In some states there are restrictions regarding registered nurses and only graduates of approved schools may take examinations for registration and the right to use the R.N., which distinguishes them from graduates of other schools, practical nurses, and attendants. These licensing boards usually prescribe the requirements for enrollment, high school graduation, length of course (3 years) and the curriculum (15 or more required subjects with experience in 6 types of nursing and 6 more usually recommended). These statements will give you some idea of the magnitude of this problem and the present state of affairs.*

The Activities for Which Nurses Are Educated

For what activities (service) are nurses educated, or, in other words, what fields are open to graduate nurses?

First and foremost is the nursing of very sick patients in the house or hospital, usually designated as private or special nursing or general duty nursing. In the early years of trained nurses private duty attracted by far the larger number of graduates. Of late hospital nursing either as general duty or specials, has come to the fore.

Second, as head nurses in hospital wards. They are executives and teachers often who are competent to do the actual nursing, if necessary, but whose main duty is to see that it is properly done by others.

Third, public health and visiting nurses. School and industrial nurses, an expanding field.

Fourth, special nurses such as operating and delivery room nurses, acting as assistants to surgeons. Somewhere between this type of specialty and general nurses are nurses who care for patients with communicable disease and mental patients. Obstetrical and children's nurses might also be classed as specializing.

Fifth, nurses who form the faculties of nursing schools, directors, teachers and supervisors.

Sixth, nurses who act as hospital executives either as superintendents of nurses responsible for the nursing of patients or as superintendents of the hospital, responsible for the management of the institution, or combining both responsibilities in the smaller institutions.

Throughout the short history of nursing, nurses have shown an inclination and ability to accept new duties and to extend their activity into new fields, so that a great change has taken place as regards the duties of the trained nurse of 1880 and the trained nurses of today. What has caused this change? First, I should place general recognition by the doctor and the public of the value of trained nurses. They have not only met successfully a real need in the community but have also developed new fields.

*These statistics and statements are taken from "Nursing Schools Today and Tomorrow," particularly Chapters 1 and 7.

Next, the demand by doctors, and acceptance by nurses, that they perform functions formerly performed by doctors, such as the taking of temperature, pulse and respiration, the collection of specimens, medications including hypodermic and the oversight of intravenous injections, taking of blood pressure, giving of anesthetics, coloric irrigation, management of complicated machines such as respirators and oxygen tents, acting as operative assistants, supervision of preparation of aseptic supplies, and many other duties. Third, nurses have shown greater competence as hospital executives in small hospitals than former lay superintendents. Fourth, as public health school nurses they have taught preventive medicine and hygiene as well as carried on their specific duties of nursing. Every new development in medicine creates new fields for nursing.

This is a record of which nurses may well be proud, but just as every rose has its thorns, so nursing and nursing schools have their troubles. What weaknesses then have developed in our present system?

The Weaknesses in Our Present System

First, there is much concern over proper organization, and uncertainty as to whether nursing schools are properly a part of the educational program of hospitals or whether they should be part of the educational duties of colleges and universities.

The Grading Committee has definitely stated their belief that every nursing school should be organized as a professional school and that, "Every professional school should be under the control of some form of managing board whose primary concern should be the conduct of our educational enterprise."

"This is because the first duty of a hospital board is to further the welfare of the hospital and the welfare of the hospital is often incompatible with the welfare of the school."

"No school can flourish on a professional plane when its policies are controlled by a hospital board."

"The (managing) board should decide matters of educational policy. It should appoint executives and faculty and delegate responsibility to them. In professional schools of nursing this would mean that the board which controls the school would appoint the head of the school and upon her nomination not only the instructors but the supervisors, head nurses and others concerned with the practice phases of student training. Appointments involving hospital responsibility should in addition be subject to approval by the hospital."

These are strong statements of revolutionary character. One member of the committee could not agree and said, "I agree that there should be a separate board or committee, the chief duty of which should be to further the interests of the school. This board, however, may be advisory only. I believe that the ultimate authority for making appointments may rest with the hospital board without prejudice to the success of the school."

The statement of the Grading Committee is based upon the premise that with few exceptions nursing has been taught in hospitals solely for the economic advantage of the hospital; therefore all hospital nursing schools are poor.

Before taking sides on this question it is well to consider the history of one school of nursing. The Massachusetts General Hospital Training School was originally started under the direction of a separate board of directors as the school was entirely separate from the hospital. The hospital paid for nursing service. All expenses of the school were paid by this separate body from 1873 to 1896 when it was transferred to the control of the hospital. The reasons for the transfer were that it was believed better control and management would result and because the cost of running the school had become burdensome. An Advisory Committee was appointed and the school has since then been run as an integral part of the hospital, the responsibility of the trustees of the hospital guided by the advice and recommendations of this Advisory Committee.

Are Hospitals Using Schools to Their Economic Advantage?

The crux of the matter seems to be whether hospitals are using schools to their economic advantage to the detriment of the educational needs of their student nurses. Some studies have already been made to compare the cost of operating a hospital with graduate nurses only, with the cost of maintaining a nursing school and operating the hospital with a skeleton graduate group assisted by students. More studies of this sort are needed, in fact each hospital conducting a nursing school should make such a study as applied to their own institution. They should deliberately evaluate what the students give in the way of services to the hospital and what the hospital gives in the way of education and training to the student. Gross inequalities in either direction call for readjustment. With expanding curricula, with the provision of better housing for students, with shorter hours of nursing for students, the economic advantage to hospitals conducting schools, has greatly decreased, so that in many instances, especially in small schools which have kept pace with educational standards, it has ceased to be an advantage.

Where hospitals are using schools to their economic advantage and to the detriment of the educational needs of their student nurses there is no ques-

tion but what remedial measures should be taken.

In studying this problem of nursing schools it is interesting to note that of all the professions—and I think it is fair to designate nursing as a profession—nursing occupies a unique position as regards the plan and method of education and training. Doctors, lawyers and ministers, dietitians, social service workers and hygienists all pay for an educational course of varying length, followed by a period during which they put into practice, under direction, their theoretical instruction, a period in which service on their part is exchanged for the practical training received. Nursing, in general, has exchanged service for education throughout the entire period of training.

A Readjustment Is Necessary

Nursing schools and hospitals have been under great pressure during the last 60 years and it is evident that in their desire to meet the needs of sick people in hospitals and to provide enough nurses to fill the expanding fields of nursing, both nursing schools and hospitals have often neglected education in order to meet the demands of service. Inadequate education in some instances and oversupply in general have resulted. A considerable readjustment is necessary.

The great problem is how this readjustment shall be made. Shall nursing schools be set up as separate educational units comparable to medical schools or schools of social service, or shall they retain a more intimate relation to hospitals?

The recommendation of the Grading Committee that all schools should be placed upon a professional basis presents a problem somewhat in the nature of making bricks without straw, in that they would set up separate schools without provision for their financing.

It may well be said that up to now nurses and hospitals have together borne the entire cost of providing nurses with an education that fits them to supply the nursing needs of the community and that now the time has come for the community to bear its share of this cost, through adequate financial support of nursing schools. Even though this is a fair statement it is impossible of immediate realization under present economic conditions and can only be advanced as something to be achieved in the future. We are still confronted with the practical question of what to do *now*.

The Grading Committee states that it is desirable that nursing schools should be separate from hospitals, or at least governed by separate boards. Who will finance the school? Will the hospital, having no control over the school, be willing to finance it? If money was available to separately endow all schools perhaps this plan might be worked out with modification as it has been in Minnesota, at Yale and other places, but certainly at present most hospitals will have to be content with their present organization and bend their energies towards removing evils and improving conditions rather than to set up new organizations. There is much that they can do. Advisory Committees for nursing schools—yes. Improvement in educational procedures to better fit nurses for nursing—yes. Additional endowment and financial support from the community—yes. Although the organization of a school is important, may it not be varied? May not academic schools connected with colleges and nursing schools on a professional basis compete in friendly rivalry with sympathetically administered hospital schools? To recommend that all schools must be fitted into a professional mold is an unwise recommendation.

Second, inadequate schools have developed; schools which were schools in name only, whose real function has been to supply hospital nursing at low cost upon the basis that student nursing was cheaper than graduate nursing. How to eliminate these inadequate schools is one of the perplexing problems. No state license schools, therefore no police control can be invoked. Shall such licensing control be set up or can the nursing, medical, and hospital associations, through the establishment of minimum standards, gradually bring about the improvement of inadequate schools or their voluntary closing where circumstances prevent their meeting these standards. On the basis that voluntary cooperation is always better in the long run than legislative compulsion, I should personally favor the plan of minimum standards.

The Oversupply of Graduate Nurses

Third, an oversupply of graduate nurses. This is an oversupply from an economic or financial standpoint, rather than a medical or public health standpoint. It is an oversupply merely because there are not enough people with large enough incomes to pay nor people with adequate incomes willing to pay for private nurses and not enough money available from tax funds for public health, school and other public nursing work to assure all graduate nurses of a reasonable annual income.

This oversupply is closely connected with the problem of the inadequate school. Twenty-five thousand graduates yearly is too many. The Grading Committee estimates that 8,600 annual graduates would be sufficient to replace the annual loss through death, marriage and retirement. Can this be controlled through voluntary cooperation of nursing schools? Can it be controlled through Boards of Registration? Can it be controlled by legislative action? I think the answer to all these questions is "No." Probably the law of supply and demand, the law of diminishing returns and similar economic laws will

bring about a recognition on the part of the community that nursing does not offer easy money and there will develop a voluntary control by the people themselves led by voluntary cooperative control by hospitals and schools.

Fourth, from an economic standpoint the community cannot afford to use highly trained nurses, whose education represents a considerable community cost per nurse, to perform hospital household duties, to nurse people in their homes for minor illnesses, to care for convalescents and the chronic sick. Neither the public nor hospitals can pay salaries for this sort of service commensurate with the expenditures for training a nurse as she should be trained. Some less expensively trained person must be used. This has brought about the demand for attendants, household nurses, children's aids to replace with less expensively trained persons the work in these fields hitherto performed by untrained persons. Whether their training can be adjusted with that of nurses, whether it should be separated and how many are needed, is so far an unsolved problem.

The Training of Attendants

This training of attendants, since it meets an economic need, deserves careful consideration. First and foremost, it must be carefully planned so as not to produce an oversupply and so further complicate the present situation. The number of convalescent and chronic cases, the number of attendants that can be used in hospitals to release nurses from household and the simpler routine duties, is distinctly limited. Trained attendants are better than ward maids or practical nurses but we must profit by past experience and neither over educate nor oversupply. I do not know the answer to this question of attendants, whether they should be trained in hospitals with nursing schools or separate organization, how many there should be, nor what length of training is desirable, but I do feel strongly that careful thought should be given to this problem before any definite decision is made or action taken, else we shall make a bad matter worse.

Solutions to Be Worked Out

I fear that by this time you are in much the same state of mind regarding nursing schools that I am myself, namely, that we can agree upon the various difficulties as stated but have no clear cut solution for them. I find it much easier to set down a list of problems about nursing schools than to provide the answers. And yet you and I, with our Board of Trustees representing the hospitals, together with the Nursing Associations, representing the nurses, the American Medical Association, the American College of Surgeons, and the College of Physicians representing the doctors, must somehow work out solutions. We must find a way:

1. To balance the educational value of the school to the nurse against the service of the nurse to the hospital.
2. To properly instruct nurses so that they may adequately serve the community in the various fields of nursing.
3. To improve the organization and financing of nursing schools.
4. To eliminate inadequate schools.
5. To maintain an economic balance between the cost of nursing education and the income nurses receive.
6. To control oversupply while graduating enough nurses to provide an adequate replacement.
7. To solve the problem of nursing care for convalescent and chronic patients either through attendants or in some other way.

As hospital superintendents it is our duty to seriously study this problem, whether our hospitals conduct schools of nursing or not, and to give our best thoughts and efforts towards working out, in conjunction with nursing associations and others, constructive procedures in this important field.

Leonard Shaw the New Editor *Canadian Hospital*

The Canadian Hospital, in its January issue, announces that Mr. Leonard Shaw of Saskatoon will assume the editorship. Mr. Shaw began the study of medicine in an English University several years ago, but during his undergraduate years decided upon engineering, and he graduated with the degree of B.Sc.

Upon coming to Canada he became interested in hospital administration, and after a limited experience in small hospital work was appointed superintendent of the small hospital at Swift Current, Saskatchewan. After a short tenure of duty at Swift Current, he was appointed as manager of the City Hospital at Moose Jaw, and became its superintendent in 1931. Two years later he was appointed superintendent of the City Hospital at Saskatoon.

Mr. Shaw is a close student of hospital problems, a splendid organizer, administrator, and a fluent writer. We congratulate *The Canadian Hospital* upon the selection of Mr. Shaw as its editor, and wish for him a continued happiness and prosperity in his new duties.

The Advantage of Central Treatment-Tray Service in the Hospital

By SISTER M. ERNESTINE and SISTER M. BORGIA
Firmin Desloge Hospital, St. Louis, Missouri

A HOSPITAL central service department is one in which the supplies needed in the nursing service are kept, cared for, and prepared for use, distributed on requisition, and returned after use. This discussion is concerned only with dressings and treatment trays. In any event, this department forms an integral part of the institution just as does the nursery, operating room, et cetera.

Until recent years the central service method of handling supplies was not in vogue, but at present it is being used rather extensively. This is probably due to the fact that the economic conditions have caused hospital authorities to give the subject of central service more serious thought, and because of the increasing trend toward centralized service in many other fields.

We claim two chief advantages for the central tray system: first, it facilitates the nursing service; second, it insures the greatest possible economy. The nursing service is greatly improved because the trays are not only always completely supplied and ready for use, but they are also always uniform in arrangement. The element of economy enters in as much as the amount of supplies needed is reduced to a minimum when they are centralized.

The Floor Nursing Service

There is also a great saving of the valuable time of the nursing personnel who are required to give constant attention to the bedside care of patients. The supervisor is not required to check, order, and care for these materials, and can therefore devote more time to the supervision of the nursing service on her division. The valuable time of her assistants is not uselessly consumed in sterilizing articles, with the attendant danger of destroying expensive equipment and supplies on account of inability to give the necessary time to proper sterilization procedures.

Central Tray Service and the Student Nurse

Some individuals in the field of nursing education object to the centralized method in those hospitals which are connected with nursing schools, because they believe that this method deprives the student nurse of an important phase of her education. In our opinion the student receives a very complete and thorough practice in this department of the work, since it is given under efficient and constant supervision. Each student spends from two to four weeks in this department, during which time she is obliged to prepare trays for the various types of treatments, and must keep the requisite amount of supplies in readiness for use.

Installation of This Type of Service

If the central service unit is to be included in the plans for an institution to be erected, the problem is a relatively simple one; but if such central service is to be installed in a hospital already in existence, certain adjustments must necessarily be made. It is essential to secure running water, to install sterilizers, supply cupboards, warming closets, and a telephone, and to provide means by which the materials can be conveyed to the various departments.

In one of our institutions where three floors are devoted to the nursing service, namely the second, third, and fourth, the central service room is located in the central part of the third floor near both the stairway and the elevator. An ordinary room was used for the purpose and was equipped as explained above; a conveyor, however, could not be installed, but, despite this fact, the arrangement has proved to be highly satisfactory, which we believe, is due to its ideal location in the hospital and to the efficiency with which the service is managed.

In another of our institutions, which was enlarged some years ago and built on a plan similar to the one just cited, a central tray unit was also installed on the third floor, near both stairway and elevator. In this instance one of the former serving kitchens and the adjacent utility room were used; a door was cut between the two rooms, spacious cupboards were built in, and all the other equipment installed. This arrangement has proved to be even more satisfactory than the one mentioned before. The room that was formerly the serving kitchen is used for the ready-to-be-used trays which are dispensed from this room, either to the nurse who calls personally, or by means of the conveyor. In the other room the non-sterile supplies are kept, the used trays are received here, and again prepared for use.

The central service system is also used in the Firmin Desloge Hospital, but there the method of handling dressings and supplies is a little different from that of the institutions mentioned. The central service department is located on the service floor. Eight of the twelve floors are devoted to nursing service; obviously the distance from the department to the various services in the hospital is greater. For

this reason the nurse in charge of the central service room is responsible for the dressing carts. At a stated time each afternoon the carts are taken to the central service department, replenished, and returned to the respective divisions.

Operation of the Service

Ordinarily a graduate nurse or a student who is on elective floor supervision calls for the trays or articles needed; she fills out a requisition blank and is held responsible for the tray. The requisition is filed until the tray is returned to the department. Emergency calls are accepted by telephone and are promptly answered by use of the conveyor, where this apparatus is available. In this case the nurse in the central department fills out the requisition blank and signs the name of the nurse who placed the call, since she is responsible for the tray or article.

Trays may be set up in the central room, covered with a sterile towel, and carried to the bedside by the nurse, or she may open the sterile pack on the division, set it up with a sterile forceps, and take it to the patient's room, as indicated. After using the articles, the nurse washes them with clear water and returns them to the central service room where they are immediately checked. This makes it possible to fix responsibility and to place breakage charge, if breakage has occurred. This arrangement limits the amount of breakage, since checking tends to make the nurse more careful.

Sterile hypodermic equipment is controlled on the exchange plan; that is, whenever a given number of non-sterile hypodermic sets are returned to central service department, the same number of sterile sets are issued.

A cardiac stimulant tray is also issued to each department, and is handled on the exchange plan as explained above.

Identification of the Various Treatment-Trays

All the trays are equipped with the articles necessary to carry out the designated nursing procedure or treatments. Enough material is kept on hand to equip trays immediately upon their return to the central service room. The labels, Hypodermoclysis, Intravenous, etc., are placed on the outside of the tray so that it may be easily recognized. On the inside of the tray a large label is placed, on which is listed the articles required on the tray. A definite place on the shelves in the central service unit is assigned to each tray. Where student nurses work in the department, or where the personnel is changed frequently, we have found it helpful to carry out a color scheme; all trays used for rectal or perineal treatment are grouped in one compartment and labeled in orange color. Those for eye, ear, nose and throat, and for gastric lavage are labeled in green. Those for phlebotomy, thoracentesis, intravenous injection, and hypodermoclysis are labeled in old rose. Those for "miscellaneous use" are labeled in blue. This arrangement helps to prevent confusion when trays are replaced.

The Return of Trays and Their Preparation

When the trays are returned to the central service unit the used articles are placed in covered containers provided for this purpose. There are individual receptacles for syringes, needles, instruments, rubber gloves, catheters, and rectal tubes. The enamel ware is placed on the sink. Rubber tubing from intravenous and hypodermoclysis apparatus and from irrigating cans are hung up to drain.

Twice daily the accumulated soiled articles are washed in strong hot soapsuds and rinsed in hot water. After washing them the rectal tubes are wrapped in a cloth and are sterilized by boiling; after which they are allowed to drain. When dry, they are powdered and placed in a container designed for the purpose. The gloves are washed and boiled in a similar manner; when dry they are mended if necessary; powdered, wrapped, and sterilized in the autoclave for twenty minutes under fifteen pounds pressure.

All other articles requiring sterilization are wrapped, placed in a wire crate, wheeled to the operating room, sterilized in the autoclave, allowed to cool, returned to the central service unit, and deposited in their respective places. An ideal arrangement is to have all sterilization facilities in conjunction with the central service department.

Summary

I. *The Floor Nursing Service*
   1. Time of personnel is saved.
   2. Amount of equipment needed is minimized.
   3. Wear and tear on materials is reduced.
   4. Order and neatness is established on the floors.

II. *The Central Tray Service and the Student Nurse*
   1. Student nurses receive more scientific instruction.
   2. Student nurses become acquainted with the problems of hospital administration.

III. *Operation of this Service*
   1. Responsibility is definitely placed.
   2. Delay in bedside care is eliminated.
   3. Service to the patient is improved.

IV. *Central Service and the Medical Profession*
   1. Doctors receive more efficient service.
   2. Doctor's time is saved because supplies are ready for immediate use.
   3. Cooperation between doctors and hospital is improved.
   4. Doctors recognize the advantage of the system.

In our experience we have found no disadvantage to the central tray service system.

Reading Ways to Health

BERNICE E. SCHILDWACHTER

Librarian, Peoria Municipal Tuberculosis Sanitarium, Peoria, Illinois

IN THE BEGINNING, the library of our Sanatorium consisted of only a few books. These were donated from time to time by the friends of the institution, chiefly on occasions when they wanted to discard old books in which they had lost interest. There was no system used in choosing the books, and the needs of the readers were never considered. There was no regular attendant employed to guide the patients in their reading and to care for the books.

In March, 1930, under the direction of Earl W. Browning, city Librarian, the Sanatorium library was reorganized, made a branch of the public library, and a member of the library staff was assigned as librarian. The books that could be used were catalogued and shelved according to a convenient system and from then on stocked by the public library. A special section was set aside for the books for the children because they are never allowed to use books and magazines handled by the adults. Because a school is maintained in the institution for the children patients, dictionaries and encyclopedias are part of the children's library equipment. The teacher and librarian cooperate in the children's school and summer recreation reading.

The library now consists of 1500 adult and 500 juvenile books and 33 regular magazine subscriptions. There are from 550-850 books issued each month, depending upon the reading desires of the patients. In the beginning, the librarian visited the sanatorium once a week, but this allowed so little time for each patient that her visits had to be extended to two days a week.

The books are ordered by the Sanatorium librarian with the approval of the chief librarian. If a book is needed for both the adult and the juvenile departments, two copies are ordered. Orders can be sent in for definite tastes, not anticipated tastes as in a public library, because the patients remain at the Sanatorium several months or more and the librarian has a chance to learn the reading interest of each individual. When there are few travel book readers, the ordering in this line is light. When there is a dearth of mystery story readers, the ordering of mystery stories is slight. Current things are always ordered as well as the necessary informational and reference books. The Sanatorium library supplies most of the needs of the patients.

Books and magazines are donated from time to time. Donations are taken with the understanding that they will be used if possible; if not, they will be discarded. Would-be donors are often hurt when told that the patients do not care for old magazines because they have all the current ones. All the donations are sent to the main library where they are sorted. Those which can be used in the Sanatorium library are catalogued and sent out to the institution. If they cannot be used, they are either put in stock for future use, or discarded. A small bookplate containing the name of the donor is pasted in the front of each gift book. At present the library has 15 gift subscriptions to magazines.

The librarian begins her work with a visit to the business office of the Sanatorium to secure the new magazines, the names of the new patients, and the names of the patients discharged since the last visit. A record is kept of each patient: his name, age, occupation, religion (desirable because of the donated religious magazines), marital state, education, date of entrance, kinds of books he took the first time, his special interests, interests formed during his stay, his favorite type of books, his favorite authors, and whatever characteristics he may have that make him an individual.

Adult patients are served from a book cart. The cart is loaded with the tastes of the patients considered. The librarian chooses books for individuals, but she is often surprised by new requests. The requests of the previous week that were not urgent when made are filled and put in their particular place on the truck. When serving the main building where the one floor is given over to women and one to men, the truck has to go back to the library to be restocked between floors. Besides the main building, there are two cottages—one having all women patients and one having both men and women. The tastes differ in these two cottages also. One morning is devoted to the patients in the two cottages, and to the children. The cart is pushed up to the bedside of the bedridden patients and they choose lying down or sitting up, as they please. The ambulant patients stop whenever and wherever they like, to pick their books. Some stop three and four times during the time it takes to go the length of a floor.

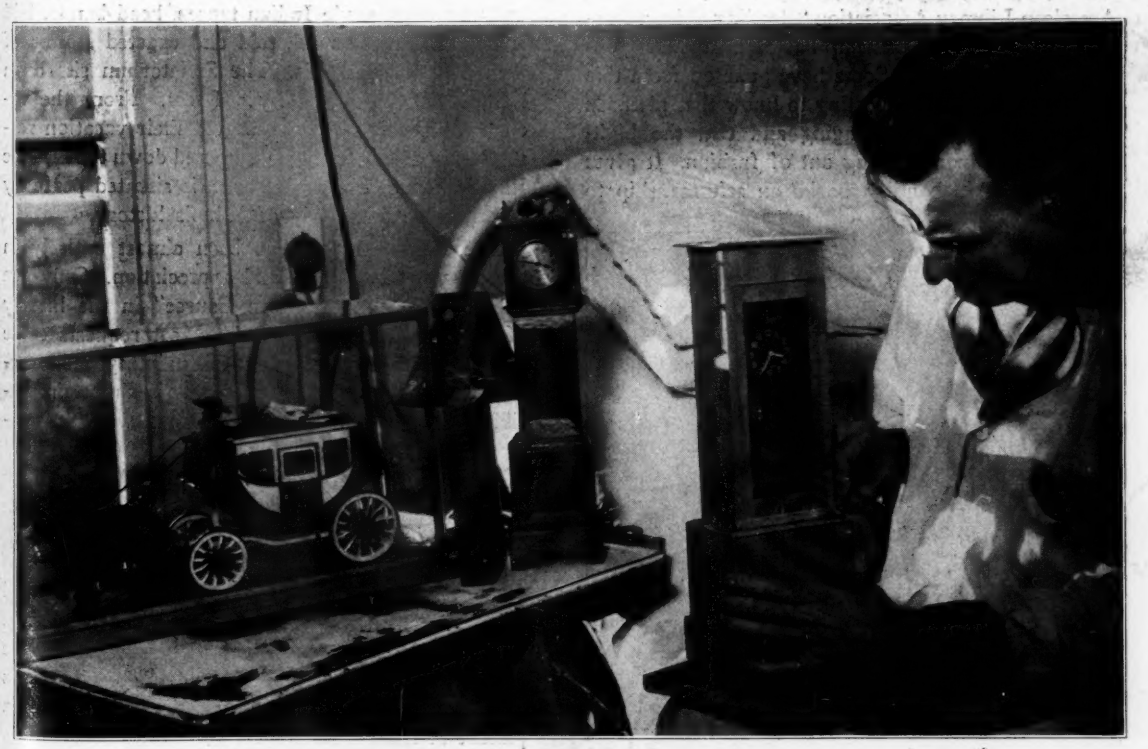
The adult patients have no library cards. The date a book is taken out and the name of the patient are put on every card taken from the books issued. There is no time limit on the books. All the patients

are there for several months at the least, and since they are there to rest the library has to cooperate with the medical service and let them read or study as their health permits. The patients have to be discouraged more often than encouraged in their reading. Those with defective vision never get encouraged, as far as reading is concerned, until they have been fitted with glasses. The most attractive editions and the best prints are always ordered. If a patient is too ill to read, the books are removed from his room until he feels the need of them again. This often damages the circulation report at the end of the month, but the library is often as much a medical service as the medicine the patients receive. After a book is out a month the patient is approached about it. Sometimes it has been overlooked and pushed to the far corner of a locker. If the patient is still using the book, it may be kept—unless, of course, there are other requests for the book. If a book is actually lost the patient is not bothered too much about it. The loss of a book is not important enough to unnerve the patient. During the five years the library has been operating, only two books have been lost. If a book disappears from the library with the card in it, it is never reordered. The patients know this, and books do not disappear.

The children come to the library and make their own selection. The boys and girls range from those in the first grade who need picture books and very simple reading, on up to those in high school who need definite books for their outside reading and reference work. They have the regulation library card which shows how many books they take out and return. A limit of three books has been made because the children have difficulty in remembering the whereabouts of more.

The bedridden patients are kept in single rooms. They do the most extensive reading. The ward patients have too many discussions going on around them to do much more than light fiction reading unless someone gets so interested in a book or a subject that he can get the rest of them interested. Pictorial books always meet with favor in the wards. When Clarence Darrow's "Story of My Life" was published it caused much interest and many discussions. The librarian was called on the telephone to settle the discussions with material found in books at the main library. Books on biology and evolution were demanded. The ward was interested.

Magazines are popular with almost all the patients. Of the 33 magazines received, the most popular are: Journal of the Outdoor Life, National Geographic, Popular Mechanics, Reader's Digest, News-Week, Stage, Red Book, and Correct English. Hobbies, Leisure, Woman's Home Companion, Saturday Evening Post, Hygeia, Harper's and Nature are demanded regularly by a limited number. The

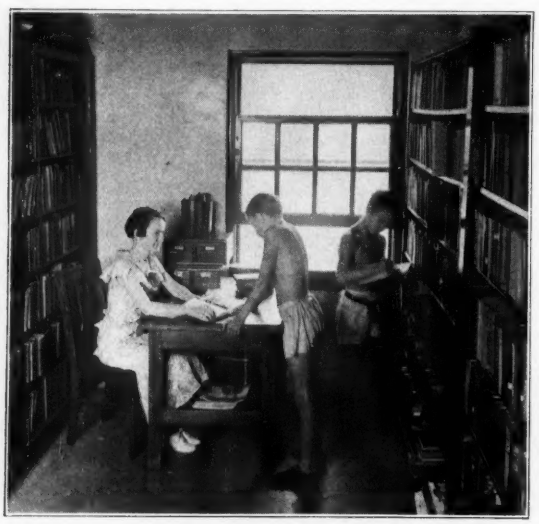


Some of the Work to Which Patients Were Led by Reading

rest of the magazines are read but not demanded regularly.

The patients remain at the Sanatorium from a few months to several years. In this time the likes and dislikes of the patients are learned. Because the books put on the cart should fill the orders does not mean that they will. The man who reads nothing but nature books and magazines may suddenly demand biography or a mystery story by title. If the books on the cart do not fill the needs, it takes only a few minutes to go down to the library and get the books that will. On some mornings six and seven trips have to be made to the library for special books, information from encyclopedias, information from the city library, back magazines, or almost anything.

Most of the reading is of light fiction: romance, mystery and western. Most of the patients want something to "take their minds off their troubles." But there is a great deal of serious reading and study done too. At the first visit of the librarian a patient usually wants something light and easy to read. He is usually ill enough not to want to tax his mind too much. After he is rested he starts getting interested in what he has always wanted to do or in what he plans on doing after he is discharged. The subject that might head the list of interests is salesmanship. Those who have been salesmen and hope to continue after they are well are interested in furthering their knowledge of their jobs and discovering where they have been wasting their energy and time. The American Library Association "Reading With a Purpose" course in salesmanship has been the most popular course followed. Some have gone on from this course. It is very comforting to know that methods of salesmanship are changing and that the high-pressure salesman is going out of fashion. It gives an assurance in handing books on salesmanship to a convalescing man when you know that he will not have to be a human steam engine to go back to his selling job.



Patients Selecting Books

Economics and psychology have been popular courses. Neilson's "Roads to Knowledge" was read by one man, and from it he picked the books suggested in the economics chapter and read the complete suggested list. One woman completed a "Reading With a Purpose Course" in Economics. One nurse who was ill did a course in biology to help her with her work when she returned to duty.

Spring and summer find the whole Sanatorium interested in birds. The hill upon which the Sanatorium is built has for its background beautifully wooded hills. It is a choice spot for the study of birds, flowers, moths, stars—everything in nature. Some of the patients have made pets of the birds and feed them on their window sills. A tufted titmouse whistled at one man's window every morning this last summer. The longer the bird had to wait the louder he whistled. He was still only after he was fed—salted peanuts. One young man made a study of trees. He drew his own pictures of the trees, their leaves (in detail) and their blossoms. Moths are the fascination of summer evenings. Gene Stratton Porter's book on moths and the insect guide are great helps in identifying the strange creatures that fly around.

During this summer the children's recreational period found them interested in Indian lore. They took Indian names, made Indian tepees, head bands, laid Indian trails, and read, told and enacted stories of the Indians of Illinois. The Sanatorium sits on a hill overlooking the Illinois River. From the orchard in which the children hold their vacation recreational period they can see up and down the historic Illinois River. The Sanatorium is situated perfectly for the romantic study of Illinois history.

The interest in art has been almost entirely in drawing, not in history and appreciation. Only one "Reading With a Purpose Course" in the history of art was followed through. Most requests come for books on cartooning and oil painting. The cartoonists have been very clever. It is almost impossible to keep the cartoonists supplied with the current magazines containing cartoons. One patient sells his cartoons to the others and makes enough money to buy new materials. His cartoons have been published in the local newspapers and are much in demand at the Sanatorium. Instruction has been given the patients in water color, pastel and oil painting. Further study came through library books. The patients have done many pictures while at the Sanatorium and lately one of the discharged patients won a prize with one of the pastels she did while a patient at the Sanatorium.

The winter months find the patients inspired by

MILWAUKEE
CHILDREN'S HOSPITAL.

the adult education classes to serious reading and studying. One course given in drama invoked a great deal of reading. An interesting and interested teacher from one of the city schools taught the class. He read many plays to them and, being an actor of some talent himself, he inspired his listeners to read many plays, classic and modern, and to read books on the history and development of the theatre. This course brought the library's first request for plays.

A course in spelling and business English made the patients interested in dictionaries and grammars. Books on spelling, punctuation and grammar are always in demand. Several dictionaries, a one volume encyclopedia, books on grammar and punctuation and the magazine "Correct English" have helped to satisfy this demand.

A book on the care of house plants was ordered for those who receive plants for gifts and want to keep them as long as possible. Those who find the care of house plants a trying task in their own homes may be interested, and may perhaps envy, the woman who was bedfast and yet cared for a hyacinth whose blossoms were the envy of those who received just "hot house" hyacinths.

One of the most inspirational patients is a girl who is a "librarian's dream." She came as a child and has grown into a lovely young woman. She has been led from the pulp magazines into good reading and she responds to almost every suggestion. Her reactions to the things she reads now are always a fresh revelation.

It is gratifying to see the tastes of some of the patients change as they come to read better and better things. Too many come to the Sanatorium with a fresh supply of pulp magazines. These gradually disappear, and their places are taken by our magazines and books. Some patients who haven't ever had time to read find the time while they are trying to get well. Some who haven't liked to read, discover that they do when they have the time to devote to reading.

Books on occupation for leisure time, what to do when you are out of work, learning to live in the new leisure giving age, magazines on hobbies and leisure, homecraft magazines and women's magazines on handicraft have led the patients into many occupations.

The interest that makes you feel that people under the most adverse conditions can create really beautiful things, beauty that you want to feel is a part of our America, is the wood carving and whittling. The books with the "how" to whittle and carve are provided by the library in the needed numbers. The magazines on hobbies and leisure inspire the patients with each issue. The ideas on "what" to carve come from the books and magazines and later, as they become more proficient, from the patients

The Librarian and the Patient

themselves. Lovely things have been made by these patients—whittling of tiny miniature violins, carving, intricate inlay, fine bits of cutting, glueing, sanding—all done in bed with everything needed having its place in a box that can be stored away in a locker or a hospital stand. Anyone who hasn't seen these people work cannot appreciate the difficulties under which they work to create these lovely things.

The adjoining pictures show some of the work to which patients were lead by their reading. The miniature grandfather clock was designed and made by one of the patients. The parts were cut out with a pocket knife and all the pediments whittled and rubbed by hand. The tiny monkey was carved from an apricot seed left from a supper tray which boasted fresh apricots. The hair and even the tiny claws have been carved. It took eight months to complete the coach with horses and rider. Every bit of this was carved by hand—the whole coach, the horses, the driver, the riders; even the harness and upholstering and costumes were cut out, sewn and pasted by hand. A checker board was also made. All the tiny pieces were cut out with a pocket knife by a patient who had been in bed for five years. One of the ambulant patients did the sanding for him because the energy needed to rub down all those pieces was more than he had stored.

There are only a few hours in the day in which the patients may read and work. Sleeping, resting, eating and bathing take up a large part of each day. Energy is there in a limited supply. They are in the Sanatorium to rest and get well; therefore they must stop their work or their reading, not when they tire, but before they become fatigued. It takes a tremendous amount of patience and time to create the smallest article. Yet they go on day after day from one piece to another, because their interest once awakened, their artistic impulse leads them to create. Books kindle this interest and talents hitherto unknown find creative expression. Experience with these patients leads one to the conviction that there is real American art born in our people. They need only some guidance and leisure time to discover their own hidden talents.

The Nurse and the Law

CLAY DIETRICH
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OVER TWO THOUSAND years ago the Latin playwright Plautus had one of his characters say, "You little know what a ticklish thing it is to go to law."

During the following twenty centuries, laws have so increased in number and content, that today, going to law is a far more "ticklish thing" than it was in the days of Plautus. In fact, the highest-priced attorneys known to me are retained because of their ability to keep their clients out of court rather than for their skill in pleading a case in court. Consequently my discussion will be of more value to you if I devote the greater part of the first section to suggesting how you can avoid conflict with the law.

Before taking up any of the legal aspects of a nurse's work, it will be well to answer an unspoken question in the minds of many of my readers. Some of you are asking, "Why should a nurse be especially concerned with the law?"

The Registered Nurse Is a Creation of the Law

A registered nurse, as such, is purely a creation of the law. She is non-existent, legally, until the legislature of the state in which she is practicing sets up laws regulating and thereby, legalizing her nursing activities. She does not have a right to call herself a registered nurse without first complying with certain rules, and passing certain tests specified by legally constituted state examining boards. As a private citizen she enjoys all the prerogatives and privileges with which custom and the law have endowed citizenship, but during every minute of her professional practice, her actions are circumscribed by the laws especially enacted for that purpose.

When a nurse assumes the rank of one whom the law recognizes as a registered nurse, she also assumes special obligations and liabilities in exchange for the special rights accorded to that rank. Those obligations and rights are specified in that special group of laws which do not affect the members of any other profession or any lay person except as any law may affect society as a whole. By every rule of simple common sense, a nurse should be reasonably familiar with the laws governing her professional activities just as a lawyer must be familiar with the statutes governing the practice of law.

Since a nurse's real work is nursing, and questions of law, while very important, are quantitatively a minor interest, she could not be expected to spend any large part of her time in studying law. Fortunately, without much effort an excellent little law library can be acquired, the foundation of which should be copies of state statutes governing the practices of nursing. To these should be added a book entitled "Nursing Jurisprudence," by Dr. Carl Scheffler. This author has had a rather unique experience that qualifies him to write about the legal phases of nursing. He was a trained nurse and later took up the study of medicine. Physical disability compelling him to retire from active practice, he studied law and became a specialist in medical and nursing jurisprudence. Another book, which will be off the press in a short time and should be of great value is entitled "Nursing Problems," by Lena Dietz, R.N., it contains comprehensive answers to hundreds of questions which confront the student and graduate nurse during her training and practicing periods. This latter book will contain a lengthy chapter on legal problems of nursing. I had real pleasure in checking it from the legal standpoint and I believe it will be very interesting.

The two books are comparatively inexpensive. The copies of the state statutes can be secured through your state senator or representative, or possibly through your state headquarters. I have made a list of Ohio statutes, with the Code section numbers and titles. Copies of this list have been made, and are available. These books contain citations of many actual cases—including the famous, or rather infamous—Somera case. A study of them will be of great value in understanding the primary principles of law that will likely be met in the practice of the profession.

A nurse may master these principles, but if she finds herself defendant in a law suit, or should feel compelled to bring suit against a person or corporation to maintain her rights, I trust she will not attempt to act as her own attorney. That would mean subjecting herself to grave risks such as are assumed by the layman who attempts to diagnose and treat his own real or fancied ailments instead of consulting a physician.

The Value of Accurate Nursing Notes

It is always best at the first sign of trouble to consult an attorney. But—and this one hint can be of great value—before a nurse calls on the attorney she should have prepared some notes on the facts of the case, facts which she is prepared to relate

under oath if necessary. I emphasize this matter of making notes for when it can be shown that such notes were made at the time the pertinent incidents occurred, or so soon thereafter, that the factor of memory is minimized, a witness when testifying, would be permitted to use the notes to refresh her memory. If introduced in court it is essential that the notes represent actual facts, that they contain no expression of opinion, and that they be original notes, not copies. Original clinical charts, and similar records comply with this rule when the entries have been made with such care that their accuracy can be established. I cannot be too emphatic in urging a nurse to be particularly exact and thorough in detail when making entries on clinical charts both in institutions and in private homes.

One cannot use as evidence anything on the chart which did not come under one's personal observation. There is an Ohio decision where a part of a clinical chart was rejected as evidence due to the fact that it contained information, of which the nurse did not have personal knowledge. In that case, the nurse had inserted in the chart, a personal history of the patient. She had no personal knowledge of this history, but had received the information from a third person. This part of the chart was not admissible as evidence as it was merely hearsay. Every clinical chart should be kept in such a manner that the nurse will feel that it would furnish facts upon which she could give sworn testimony months, or even years afterward. Acceptance by a court of such notes, charts, and other written material as evidence, takes much of the viciousness out of a hostile cross-examiner. Written evidence speaks for itself and he is deprived of just that much opportunity for hostile action.

My chief reason for mentioning the matter of notes at this point is that the notes enable an attorney to get such a factual picture of the situation that he might convince the other side that their case ought to be dropped; in other words, the notes might keep one out of court. This is particularly true when a nurse may feel it necessary to start a lawsuit. I hope that no one may be inconvenienced by being compelled to sue a patient or other employer. But, some misunderstanding may arise as to the amount of compensation for services, or the person or institution responsible for payment may deny responsibility, and it may be necessary to have the matter decided in a court of law. In such cases written evidence is of far greater value than mere verbal evidence and is almost proof against attack by the other side.

When there is any possibility of misunderstanding as to the amount to be paid or as to the identity of the payer, a nurse should have a definite agreement with the person who accepts responsibility for payment, and make a note of the agreement as soon as possible. I don't mean that a coldly business attitude should be adopted and a written contract insisted upon. There are all sorts of ways of getting the facts; such as the identity of the responsible party, and whether or not they understand when and how a nurse is to be paid. A few diplomatic questions will eliminate any chance of introducing a note of irritation into a sickroom atmosphere already charged with anxiety and stress.

If an employer is a corporation or institution the nurse will have a contract, but the contract should cover all conditions of employment. This definite understanding is a protection, and helps to prevent that institutional bug-a-boo—friction between members of the staff.

From the purely legal standpoint, the notes would provide reasonable evidence that there had been a meeting of minds. It is a basic principle of law that, when a meeting of minds can be proved, the details of the agreement as shown will prevail, provided the intent of the details does not conflict with the law.

The Nurse as a Defendant

In the cases in which a nurse may find herself to be a defendant, the possession of a diary or other notes written at the time of the events involved, will be her best protection. For example:

Suppose following the serious illness or death of a patient the nurse is accused of negligence, which negligence is claimed to have been the cause of the serious or fatal results to the patient. The nurse produces her records which show that at a certain time she noted symptoms—such as pulse, respiration, temperature, etc.—which prompted her to advise the patient's family that the case was serious, and to call their physician immediately. Interpretation of all the facts by competent witnesses establishes the time at which the nurse gave the warning, and that the family was delinquent in calling the doctor. The nurse's records would exonerate her of any negligence.

Another example: and this has happened many times. Suppose a nurse is called upon, under threat of bodily injury or even death, to aid a sick or wounded fugitive from justice. There is no law to prevent her giving nursing service to any sick or wounded human being but if she believes, or knows, that the patient is a fugitive from justice, the law requires that she notify officials as to the facts as soon as possible. Conditions might be such that some noticeable time elapses between the giving of the nursing service and notification of the officials, thus making her subject to suspicion. If she makes accurate notes, especially as to the time element, the notes can be checked against the known facts so that

it can be shown that she complied with the law so far as was within her power and she has avoided a conflict with the law.

Scores of other situations could be cited to show the importance of notes and records as compared with verbal statements when dealing with the law.

Now I want to consider some of the circumstances that cause most of the complaints about law violation by nurses, and occasionally result in civil or criminal action against nurses. I refer to the actions of nurses employed in industrial plants, department stores, summer parks, and other places where emergency hospitals are maintained.

The Nurse Is Not Permitted to Practice Medicine

While such work usually is presumed to be under the supervision of a regular physician, the working conditions are such that the nurse performs most of her duties when the doctor is not present, in fact he is called only for serious cases. Eventually the nurse loses sight of the line between first aid and the practice of medicine. As each case comes in she renders the service indicated as necessary by the nature of the case. If she does think of legal or ethical restrictions, she justifies her every act by the calm assumption that she is working under the supervision of the licensed physician or that if everything were not strictly ethical and legal, she would not have been employed. Eventually some mishap occurs. The doctor, not having been present, certainly can't be held responsible, and the nurse is liable to civil or criminal action or possibly both, all because she was not careful to keep on her side of the line between first aid and the practice of medicine.

Here is a typical case in which the nurse probably thought she was justified by a seeming "emergency" condition. The nurse at a beach resort some miles from the office of the nearest physician had the case of an employee who had climbed a tower supporting a water tank. While adjusting some valves at the top of the tank he lost his balance and toppled into the tank, cutting a deep gash in his scalp. He was removed from the tank and revived by the regulation first aid for drowned persons. The nurse stanched the flow of blood from the wound, applied an antiseptic, and then stitched the wound. Now resuscitation of a drowned man, stopping the flow of blood, the application of an antiseptic and the use of a suitable bandage were within the field of her first aid, but when she stitched the wound she crossed the line into the practice of medicine and was a law violator. The act of stitching was not necessary as first aid and should have been performed by a doctor. There are at times extenuating circumstances which might justify a nurse in performing acts ordinarily construed as practicing medicine. But these are so varied and involved with the facts of each case that I will not take space to discuss them now. When emergency cases occur one won't have time to consult an attorney. When in doubt, a good rule to follow is that legal first aid is confined to acts necessary to save life. Note that word *necessary*.

Cases That May Result in Criminal Action Against the Nurse

Because of the likelihood of trouble arising from the conditions I have mentioned those cases may easily result in criminal charges being brought against a nurse. You will understand that you may become a criminal because of what you do not do, just as well as because of what you do. You can be a criminal because of deliberate intent, and you can become a criminal through negligence. For instance, a nurse might apply a water bottle so hot that the resultant burn would cause the death of the patient; she might carelessly administer a fatal dose of a narcotic; she might unthinkingly deviate from a prescribed diet, thus causing the death of a patient; she might make a mistake on a sponge count in a surgical case. All of these things have happened. The fact that the guilty parties did not intend to do these things did not excuse them. The law said the responsible parties were guilty of criminal negligence. Nor does it avail you to plead that you were obeying orders of a higher-up. In the famous, or infamous Somera case—which you will find described in both the textbooks I have mentioned—a nurse obeyed a double-checked order in preparation of a solution for hypodermic injection, which was administered by the operating surgeon after she had prepared it on his order. The patient died. The nurse, the surgeon, and his assistant were charged with manslaughter. The nurse was found guilty of homocide, sentenced to prison, and ordered to pay damages to the relatives of the deceased patient. The court held, that as a graduate nurse, she knew that a mistake had been made, yet she obeyed the order and stood by while the solution was administered, instead of refusing to be a party to the error. If you are ordered to do something illegal, the law will not protect you if you do it. Remember that one who assists in wrongdoing, even in a minor capacity, is guilty in the eyes of the law.

A practical nurse might have been excused on the grounds of ignorance—but the court says a graduate nurse is presumed to know what constitutes proper or improper dosage, safe or unsafe heat applications, normal or abnormal pulse, and other subjects of a nurse's studies.

A nurse may unwittingly become subject to criminal law when she is handling narcotics. Every nurse should be quite familiar with the Federal law gov-

erning the possession of narcotics. Known as the Harrison Anti-Narcotic law, it takes absolutely no account of ignorance of its provisions, nor of ignorance of the properties of any drug specified by that law.

No person or corporation, no physician or institution may have legal possesison of narcotics unless the possession is authorized by a Federal license, which must be displayed in such a conspicuous place that all concerned may see it plainly, or unless the possessor can prove that he or she obtained the drug as a patient by means of a prescription from a regularly licensed physician, or as an agent of a licensed physician for administration to a patient.

I was told once of a case where the doctor had prescribed hypodermics of morphine. Because some members of the patient's family insisted in telling the doctor what to do, he left the case, but the nurse remained. The nurse continued to administer the morphine, thereby rendering herself liable to prosecution. When the doctor left the case the nurse was no longer his agent, and was administering a narcotic illegally. Of course, when a second doctor made a similar prescription, this again established the legality of the treatment—but if anything had happened in the interval—that nurse would have been in a bad position. I would get acquainted with the provisions of the Harrison Anti-Narcotic law and then you will appreciate the significance of a numbered and dated narcotic license.

The Nurse's Duty to Her Patient

There is another situation which might result in a suit being brought against a nurse who does not know how far her duty to a patient extends. I can easily imagine a situation in which conditions become so intolerable that a nurse cannot remain on a case and keep her self-respect. Also I know that a nurse may have made an engagement to take another case prior to her employment on her current case; and the current case still requires care. Ethically and legally she must give her current employers sufficient notice of her intention to leave to enable them to secure another nurse. If she has prior engagements she should allow leeway sufficient for the nature of the case involved. For a surgical case, set for a specific date, of course, she can make a definite arrangement. For a maternity case, for example, she would have to allow for a variable time. In all events, a nurse, should have a definite understanding with all concerned as to prior engagements. Failing such precautions, a nurse leaving a case without due notice might find herself the defendant in a civil suit for damages and perhaps be subject to criminal charges if her action affected the patient adversely.

The Nurse's Function in Making a Patient's Will

I know of comparatively few cases in which nurses have been drawn into litigation because of legacies or of the assistance they may have given in the making of a will. But since the possibility of death is always a factor in sickness, the nurse is likely, at any time, to be asked to help a patient draw a will. Normally, the act of drawing a will is held to be practicing law. Furthermore, it has been said that the lay person who draws a will is the most fruitful source of a lawyer's income, because wills thus drawn are the subjects of so much litigation; hence the nurse should not be a party to the making of a patient's will unless all reasonable efforts to secure the services of an attorney have failed. Then, because the making of a will contributes so much to the peace of mind of a patient who believes that death is near; because preserving patient's peace of mind is one of a nurse's cardinal duties, it would be well to know, at least the fundamental requirements of a valid will. I will take the time for just a few hints about the necessary elements of what, under normal conditions, would be accepted as a valid will.

First, it should contain the name and place of residence of the testator, this is the person making the will. It should indicate that the maker is of sound and disposing mind and memory. The phrase sound mind is self explanatory; the phrase disposing memory means that the testator knows the extent and nature of such property as he has a right to dispose of by will and that he knows how the legatees specified are related to him. For instance, a will might mention Mary Brown; there probably are thousands of Mary Browns. The relationship is established this way; to Mary Brown, my wife, I bequeath such and such property. The property or properties willed, also should be identified. Doing these things would be evidence of disposing memory. The will should indicate that the testator was conscious of the fact that he was making his last will and that he was declaring it to be such; thus showing he knew he was invalidating any previous wills. It should name some person who is to act as executor to carry out the provisions of the will.

A will is executed, that is, it is made valid, if the maker signs it at the end and it is witnessed by two persons, who saw the testator sign it and saw each other sign as witnesses. After the maker's signature, there should be an attestation clause stating that the testator declared it to be his last will, that the witnesses believed the maker to be of sound mind and disposing memory, that the will was signed in their presence and in the presence of each other. I realize that these directions are rather technical. Yet they are comparatively simple, and every nurse should

know them. Certainly, some time in a nurse's career she will be called upon in an emergency to draw a simple form of will.

The Nurse as a Legal Witness

Just one thing more about the law as it now affects a nurse. No matter how law abiding she is, both in act and intent, she cannot avoid being subpoenaed as a witness. With the large number of automobile accident cases, there are in the courts now, she is quite certain to be subpoenaed at some time to testify as to the facts of a case. And when she is subpoenaed, she must go, unless it is physically impossible for her to do so. Whether the day in court becomes a pleasant memory or a mild shudder, depends largely upon herself.

The judge and jury welcome a witness who plainly shows that she is telling only the truth as she knows it, and they will give such a witness the benefit of any doubts that might arise. This is especially true when the witness uses plain language that can be understood by all concerned. Therefore, before going to court, she should check over her knowledge of the case and mentally assemble the facts. She should be sure and forget her opinions; the court is not interested in opinions unless one is testifying as an expert. Only a witness who is lying or attempting to conceal something, has anything to fear from even the most vicious cross-examination. If a nurse is sure of her facts, cross-examination need not bother her, she can answer all questions confidently. If she is questioned about something about which she is ignorant or in doubt, she should just say that she does not know. Judges and juries are suspicious of witnesses that are ashamed to admit that they don't know it all. One should take all the time necessary to formulate answers; that is one's legal right. If the truthful answer to any question might incriminate, remember one does not have to answer such a question.

Do not allow a cross-examiner to confuse you. Occasionally one meets an attorney that might adopt brow-beating tactics on cross-examination. If he does adopt such tactics, I suggest that a nurse remember her professional training and treat him as she would an unruly patient. If he begins to shout and do some verbal gymnastics, just regard him as a patient who is a bit delirious. Maintain one's self control and stick to the facts. Remember also when testifying, that the jury under most circumstances, are not familiar with medical or anatomial terms. Give evidence in the simplest and least technical terms possible. After all, it is only the evidence that is understood that has weight. This may not be orthodox legal advice, but I am sure it will be found surprisingly practical. It will serve at least to suggest the many ways in which the nurse can avoid conflict with the law.

The Duties of the Nurse in Helping to Formulate Laws

In closing may I suggest that familiarity with the law offers the best means of knowing how to avoid litigation. The easiest way to become familiar with the law is to take an active part in the work of formulating the laws and then having them enacted and made effective.

I am somewhat familiar with the heart-breaking disappointments encountered and of the amazing amount of actual physical effort expended by a small group of nurses in securing the enactment of many of the laws that govern the activities of the nursing profession in Ohio; the laws that have changed the status of a registered nurse from that of a sort of upper-servant into that of a member of a profession. To those of you who are not very well informed as to the work of these pioneer nurses, I suggest that you induce members of this group to tell you how the first legislative committees had to coax and prod and threaten, for months and sometimes for years, a reluctant legislature into enacting laws framed for the protection of nurses and their patients. Most of that difficult and discouraging work was made necessary by the fact that women had no voting privilege, consequently legislators may have been a bit slow in cooperating with legislative workers. Furthermore, the nurses' organization was not as compact and coordinated as it is now. Nurses did not have experience in work in—and with—governmental departments such as public health, school bodies, state boards, etc. This lack of what might be called political training may have been a partial excuse for the majority of nurses permitting practically all the work of promoting favorable legislation to be done by a comparatively small number of their fellow nurses. This excuse no longer exists; most nurses, either during their school days or in their practical work, have taken some part in organization work—and all may vote.

The latest report of the Ohio State Association shows that it has well over 7,000 members, all registered nurses with an intelligence rating, which by virtue of the requirements of nursing work, must be far beyond that of the average citizen. In all sincerity I tell you that if I had back of me 7,000 such women in the State of Ohio each doing her part as an active worker and voter, I would undertake to have enacted any law that would be beneficial to nurses and their patients.

The legal situation, as it affects nurses, therefore is governed entirely by what organized nurses want and how much work they are willing to do to get what they want. Certainly no one else will make

any special effort to secure favorable legislation. Certainly no one else is qualified to shape the legislation nurses need and want.

If the members of the rank and file will do their part whole-heartedly when those committees send out a call for support for a proposed nurses' law, I feel perfectly safe in saying that the relations between the nurse and the law could easily be the envy of any other professional group. I hope the nurses establish such relations.

Surgical Catgut

WARREN P. MORRILL, M.D.

INTERNAL medicine is strictly a restorative art; it attempts to correct function without destruction of tissue. The surgeon attempts to correct function by destruction or removal of the offending tissue.

Medicine has left little record of its history prior to the invention of the written word, but surgery has left many records in the relics of early man which we have been able to find and decipher or interpret. Skulls of the stone age show trephine scars left by the stone ancestors of the Bard Parker or the electric drill. That surgeons were not always successful in their efforts to reconstruct after destroying is amply evidenced in the penalties set forth in the medico-legal precepts of the code of Hamurabbi of Babylon dating back some 2400 years B.C.

The Early History of Sutures

Surgical procedures resolve themselves into two distinct stages, a destructive one for the purpose of removal of the offending tissue, and the repair stage, designed to assist nature so far as possible in her reconstruction of the invaded area and its functions. The Code of Hamurabbi gives little evidence that the repair phase was then practiced but the records of the Egyptians as early as 2000 years B.C. give clear evidence of the use of adhesive to approximate, and of sutures, to close wounds. Sushrata, 600 B.C., used sutures to close abdominal wounds—cotton, strips of leather, animal sutures and plaited horsehair. Rufus of Ephesus used ligatures for large vessels about 100 A.D.; Hua Tu, the Chinese, 115-205 A.D., mentions medically treated sutures; in 200 A.D., Antyllus the Greek, used Celtic linen and catgut for ligatures. The period from the collapse of Rome to the invention of printing was quite as dark an age for surgery as for other arts and sciences. But Rhazes of Bagdad (860-932) reported the use of harp strings made from the twisted intestines of sheep. Fracetti, the Italian (1200-1277) describes the suture of nerves and comments on the relative merits of waxed thread and of silk.

Ambroise Paré (1510-1590) discarded the use of the red hot knife and boiling oil in favor of ligatures for the control of hemorrhage but after bitter experience with catgut gave it up in disgust. A hundred years later Purmanu about 1700, sutured intestines with silk or with "the intestines of lamb soaked overnight in wine."

Little more was heard of catgut in surgery until Dr. P. Sing Physick, Professor of Surgery at the University of Pennsylvania, reintroduced its use in 1816. Noting that leather used in adhesive soon rotted away, he tested buckskin, varnished leather, catgut and tendon by suturing a wound in a horse and found that they rotted away in a sufficiently short period. Sir Astley Cooper within a year or two later ligated the popliteal artery with catgut and for a short period of time used it very freely, but was soon led to desert it by the number of infections and late hemorrhages occurring after its use. The next highlight was in 1845 when Luigi Porta, Professor of Surgery at Pavia reported on 600 animal experiments testing the use of catgut, silk, horsehair, and hemp as ligatures and reported catgut as the most "homogeneous."

The Antiseptic Period

It remained for Lister to open the door to modern surgery by his application of the bacteriological principles enunciated by Pasteur. Of course he was scoffed at, reviled, and punished for his temerity in assuming that the surgeon could possibly introduce anything into a wound that could harm the patient. However little he may have dwelt on this phase of the question, his advocacy of the use of antiseptics and of an antiseptic spray could have no other implication. He suffered the same profes-

sional persecution as his English predecessor, Harvey, when he announced his discovery of the circulation of the blood, that Semmelweiss had when, less than two decades before, he had proved that puerperal fever was transmitted by the examining midwife, and the ridicule that greeted our own Dr. Oliver Wendell Holmes when he accepted and preached the doctrine of Semmelweiss.

But he persisted and in 1869 we hear him mention antiseptic catgut as a substitute for his previously used silk dipped in wax and soaked in carbolic acid. A little earlier than this, our own F. Marion Sims, in the annual oration of the New York Academy of Medicine said:

"In 1845 I conceived the idea of curing vesico vaginal fistula and entered upon a broad field of experiment with all the ardor of a devotee. After nearly four years of fruitless labor silver wire was fortunately substituted for silk as a suture, and lo, a new era dawns upon surgery. This was on the 21st of June, 1849, since which time I have used no other suture in any department of surgery."

Continental surgeons were somewhat more receptive to Lister's ideas than were his English Brethren. But so late as 1881 Kocher, after deserting phenolized catgut, tried soaking it in juniper oil and ended by saying "fort mit den catgut" (Away with the catgut).

Despite all these vicissitudes, surgeons would not entirely desert catgut. It was pliable, absorbable and had the requisite tensile strength. All it lacked was a method of certain and dependable sterilization. There follows a period of corrosive sublimation methods from 1783 to 1903, a formalin period from 1895 to 1909 with a recrudescence in 1926, a heat sterilization period from 1888 to 1909. In 1903 Nicholas Senn returned from Europe an advocate of iodized catgut on the theory that sutures should not only be sterile but antiseptic as well, in order to inhibit the growth of any bacteria that might be introduced by the surgeon. This gave rise to a period of iodized catgut which even yet claims some adherents.

The Processing of Surgical Catgut

Catgut is made from the submucous layer of the intestine of the sheep, each animal yielding about five feet. The gut, removed from the animal, is stripped of its contents, slit and then the "runner" or submucosa is stripped free, washed thoroughly, scraped free of fat and other adherent particles, twisted, and preserved either in antiseptic solution or by freezing.

It then goes to a middleman who cleans and dresses it, twists it into strands of the required sizes, sandpapers it to uniform caliber, and in turn sells it to the music dealer or to the surgical catgut manufacturer, as the case may be.

There are four qualities which the surgeon demands of a suture, tensile strength, pliability, sterility, and in the case of catgut, absorbability.

Tensile Strength and Caliber

The diameter and tensile strength recommended by the U. S. Bureau of Standards and agreed to by the majority of manufacturers is as follows:

Size	Diameter in Millimeters, Minimum	Maximum	Tensile Strength in Pounds On Straight Pull	Over a Surgeon's Knot
000	0.16	0.23	3	2
00	0.23	0.30	4	3
0	0.30	0.37	7	5
1	0.37	0.44	11	7
2	0.44	0.51	14	9
3	0.51	0.58	16	11
4	0.58	0.65	20	14

In an editorial in Surgery, Gynecology and Obstetrics, Harvey[1] points out that few tissues will stand a pull of more than 5 lbs. without tearing, and that since the breaking strength of the No. 0 size is 7 lbs. it is rare that the use of a larger size is justified. Suggesting that the psychology of the surgeon is quite as often the cause of breaking the suture as is any fault of the suture itself, he further points out that postoperative hemorrhage of large arteries is due to the ligature being pushed over the cut end of the artery rather than to any failure of the ligature material or knot and that the obvious remedy is to transfix the vessel.

It is true that comparative examinations of a large number of sutures may reveal rather wide variations in tensile strength or in caliber, but it is very rare that any will be shown to be below the minimum allowed for the labeled size and its corresponding tensile strength.

Sterility

The question of sterility has been a most difficult one to solve and it is in the last ten years that more progress has been made in this particular than in the preceding thousand since Rhazes tried it and abandoned it on account of the large number of abscesses following its use.

In 1923 Meleney investigated two cases of gas gangrene in a large New York hospital and found C. Maligni Oedemati in the wounds and in tubes of catgut from the same batch as had been used in the wounds. In 1925, 5 patients operated on in four days died with similar symptoms and in this case two specimens out of four tested showed positive for gas gangrene along with four other gas formers.

In starting his research work Meleney procured 83 specimens of raw catgut in the open market, and

38 of them yielded pathological anaerobes. Only one yielded a tetanus-like organism and this would not produce toxin in pure culture but did so in mixed culture. In discussing Meleney's report, Koch called attention to the fact that Meleney had already reported that thirty-three per cent of an operating room staff harbored hemolytic streptococcus in their noses and throats and that the proportion increased as the winter season progressed. This is important in connection with his finding that the majority of surgeons did not include the nostrils in their face masks and Walker's[2] finding that few of the masks in common use are a real barrier against the passage of bacteria from the mouth or nose to exposed culture plates.

In 1931 Meleney[3] reported on 174 samples of prepared surgical catgut sent in by surgical clinics either from stock or from open market purchase. Of these 8 were not labeled and the remaining 166 represented 17 different manufacturers or jobbers. Of the labeled specimens those from 10 firms showed no growth, while, of those from the remaining 7 firms, 5 showed spore formers but none showed pyogenic organisms.

From this point on Meleney's work revolves largely about the so-called Meleney test. This test is based on the fact that if catgut is sterilized by chemicals the catgut may retain a sufficient amount of the chemical to inhibit the growth of bacteria even though they be present and it may thus show no growth unless the catgut is first subjected to a chemical process for removal of the inhibiting substances and then cultured for as long as fifteen days. This failure to give an early growth may be due to persistence of some of the chemical or to the fact that the bacteria are deep in the substance of the strand and have no opportunity to grow until the outer portion has been penetrated and softened by the culture medium.

In 1933 Clock[4] reported on a recheck of Meleney's results and found that samples of a brand which did not pass Meleney's test in 1931 did do so in 1932. Further investigation revealed evidence that the process of manufacture had been so altered that there remained in the finished catgut an amount of chemical too great to be removed by the Meleney procedure.

Adjusting his process to ensure removal of all the chemicals, Clock was then able to get positive growth from all twelve samples of plain catgut tested as well as from eight of the twelve samples of chromic tested.

In 1934 Clock[5] extended his studies to foreign-made catgut sutures and found that of 401 lots examined, 47 contained living bacteria. Those brands which showed absence of bacterial growth exhibited the physical properties characteristic of heat sterilized catgut. Clock agrees with Meleney in concluding:

Heat Sterilization

1. The so-called chemical sterilization of surgical catgut by any method yet devised is inefficient and unreliable.
2. Carefully controlled heat sterilization is the only reliable and positive method of sterilizing catgut sutures.

After the catgut is received by the suture manufacturer it is polished, calibrated, and in the case of chromic, chromicized. It is then ready for sterilization. Due to its animal nature the sterilization must be carried out in a dry medium, as the presence of any moisture and the use of heat would result in a simple "stewing" of the material. The catgut is therefore wound on the bobbins and placed in the tubes in which it is later distributed. The tubes are then filled with an anhydrous fluid of high boiling point—usually cumol (B.P. 329° F.)—and sterilized at a temperature of about 300° F. for one hour. Since the catgut begins to lose both pliability and tensile strength at about this temperature, manufacturers have found a serious problem in maintaining an adequate temperature for sterilization and still retaining the other necessary characteristics of the catgut. The temperature necessary may not be a trade secret but has at least not been publicized by the manufacturers. The bacteriologists and surgeons who have written on the subject have usually spoken of the sterilization in terms of steam pressure to which the material has been subjected rather than in terms of temperature measured as temperature. They seem to have assumed that the two methods of measurement were interchangeable. But Underwood[6] has shown that this is not the case except when it is certain that all air has been exhausted from the autoclave. Pure steam admitted to a chamber from which air has not been exhausted will give a temperature of but 212° when it reaches a pressure of 15 lb. per square inch; but if all the air has been exhausted, the temperature will be 250° F. at the same pressure. There is unpublished evidence that a temperature of 290° F. for one hour is not sufficient to kill all organisms and their spores but that 295° F. for one hour is certain to kill them. Clock,* (working with artificially infected samples) believes a temperature of 165° C. (329° F.) for three hours is the minimum safe sterilization procedure. It is thus apparent that the entire process of sterilization must be carried out under very close and accurate control if the product is to be sterile and still retain its pliability and tensile strength.

*Private communication.

On completion of the sterilization process the tubes are removed from the sterilizer, emptied of cumol and taken to the sealing room where they are half filled with the tubing solution, sealed by a glass blower's torch and are then ready for labeling and distribution.

Boilable Versus Non-Boilable

Formerly catgut was commonly distributed as boilable and as non-boilable. The difference between the two varieties lies in the fact that if the catgut is in an aqueous solution it cannot be boiled. Up to the time of filling with tubing fluid and sealing there is no difference in the process to which the two are subjected. For the boilable variety some anhydrous fluid such as toluol is used as a tubing fluid while the non-boilable is usually tubed in ninety-five per cent alcohol containing a sufficient amount of an antiseptic (1-1000 potassium mercuric iodide, for instance) to provide for any contamination which may have occurred after completion of the sterilization process. In the case of the non-boilable the five per cent water content of the tubing fluid is sufficient to maintain the pliability of the catgut and it can therefore be used direct from the tube without intermediate handling. In the case of the boilable the dehydration resulting from its storage in an anhydrous medium results in a marked loss of pliability and it must therefore be moistened and thereby subjected to added opportunity for contamination, in order to restore its pliability. Since the sterilizing process used during manufacture is more rigorous than that of the hospital sterilization process and the technique of the sealing room is quite as good if not better than that of the operating room, the only gain there is in the use of the boilable variety is in sterilizing the exterior of the tube, and this can be done quite as effectively by storing the tubes in some good antiseptic solution such as potassium mercuric iodide in alcohol.

Absorbability

Absorbability in the tissues is the one characteristic which distinguishes catgut from all other sutures in common use. And strangely enough it is the one quality concerning which least is known. Plain catgut is only used when the surgeon is not concerned with its retaining its tensile strength over any considerable time. When longer retention of strength is desired, the so-called chromic catgut is used. Unfortunately, the terms 10-day, 20-day, and 40-day have come into common use to indicate the relative lengths of time that the catgut may be expected to serve its intended purpose. These terms bear little relation to the actual length of time that the catgut will resist absorption in any given wound. Digestion in a trypsin medium yields fairly constant results. But absorption rate as determined by burying in the striated muscle of an apparently normal animal gives widely varying results. It is thus apparent that the designations of 10-day, etc., are merely indications of the relative rate at which absorption may take place but not to be understood as the time during which the suture may be expected to retain its strength in any particular living tissue.

Howes[7] has shown that catgut, either plain or chromicized, loses strength much more rapidly in an inflammatory exudate, than in an uninfected area. The rate of loss of strength in an infected wound approximates that occurring in a gastric digestion. For instance, No. 1, 20-day chromicized catgut with an initial tensile strength of 12 lbs. when placed in an uninfected wound lost fifty per cent of its strength in 14 days and all in 21 days. The same quality of catgut placed in an infected wound lost fifty per cent of its strength in 1½ days and all in 6 days.

Control of the absorption rate is attained by exposing the plain catgut to the action of a chromic acid solution. The resistance to absorption depends upon the fact that in this "tanning process" the chromic acid reacts with the collagen of the catgut and renders it resistant to digestion by the tissue fluids. This reaction is very delicate, being seriously retarded by any variation in the temperature or ionic concentration of the bath. The catgut may absorb enough chromium to yield sufficient of the salt when tested by the chemical ash method without, however, sufficient chromic acid entering into actual chemical combination with the collagen of the catgut to give it the requisite resistance to digestion in the tissues.

Unfortunately the absorption of catgut in the tissues is not an unmixed blessing. Used to avoid the irritant foreign body effect of a non-absorbable suture left in the tissues, the absorption process itself creates a point of least resistance due to the toxic split protein products of the collagen produced in the absorption process. Babcock[8] has shown that around catgut an area of inflammation appears within 24 hours; followed within a week by sufficient necrosis to cause canalization. Although always present in some degree, the degree varies in different individuals. In studying postoperative infections, Eliason and McLaughlin[9] found that reduction of the amount of catgut under the subcutaneous tissue was the most important factor in reducing the incidence of serum collections. Meleney[10] reports that in ten successive partial thyroidectomies ligated and sutured with catgut, four developed hematomata and two developed infections. Ten cases ligated and sutured with silk developed neither. Use of silk in clean wounds has been the major factor in the reduction of wound infections.

There is no reason to believe that catgut will soon be displaced, despite its deficiencies. The technic required in the use of non-absorbable sutures is so much more exacting than in the use of absorbable sutures, that it is probable that the majority of surgeons will continue to prefer the absorbable variety in most situations. Likewise absorption involves digestion with the potential development of toxic products whatever material may be used, and no other material has yet been found which combines the many advantages of tensile strength, pliability, resistance to the destructive action of the sterilizing process and absorbability.

In 1930 the writer brought the matter of standardization of the manufacture of catgut sutures to the attention of The Bureau of Commercial Standards of the U. S. Department of Commerce which with the collaboration of The Bureau of Standards developed a set of specifications and tests. When submitted to the manufacturers these standards failed of approval due to certain procedural requirements of The Bureau.

Since that time, at the instance of the manufacturers, The American College of Surgeons has given some consideration to the matter and it is understood that the problem is now under study by an appropriate agency of the American Medical Association.

Summary

From the above considerations it would appear that:

1. Catgut as now prepared by the more reliable manufacturers fulfills the needs of the surgeon so far as tensile strength and pliability are concerned.
2. That all efforts to sterilize catgut by chemical means have proven futile.
3. The sterilization of catgut by heat is satisfactory only when accurately controlled. There is evidence that a temperature of 295° Fahrenheit maintained for one hour is sufficient, though one investigator believes that exposure to a temperature of 165° Centigrade (329° F.) for three hours is the minimum that is uniformly reliable and positive.
4. The rate at which catgut either plain or chromicized loses tensile strength by digestion and absorption within the tissue varies according to the condition of the tissues themselves.
5. The present method of indicating the rate of loss of tensile strength of chromicized catgut when buried within living tissue, as 10-day, 20-day, etc., is misleading and should be replaced by some terminology which will indicate relative rate of loss of strength but not imply any given length of time the catgut may be expected to retain its tensile strength.
6. There should be some means of inspection and control of the manufacture of surgical catgut which would ensure to the surgeon uniformity of characteristics of all catgut within each label group.

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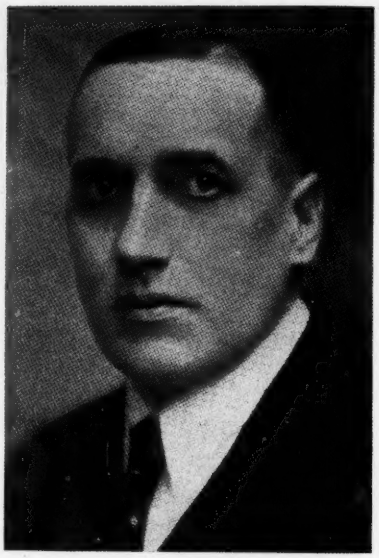
The Toronto Western Hospital

A Model in Architectural Arrangement

A. J. SWANSON, General Superintendent, and JAMES GOVAN, Architect

IN DECIDING to proceed with the erection of the extension to our existing hospital plant, the Board of Governors decided that inasmuch as we must tie in our services in such a way that they would adequately service both the old and the new buildings, considerable thought should be given by our architects and consultants to the most efficient lay-out of our services which are common to the entire set of buildings on the site.

Studies by the architects showed that control of both summer and winter indoor temperatures would be facilitated by orienting the building, with its main axis east and west and the development of the plans along these lines has provided much wider open court; between the buildings, and greatly reduced the problem of noise from the streets.



A. J. SWANSON
General Superintendent

Administrative Difficulties During Construction

Few hospitals could have presented more difficulties for the administrative staff during the construction period.

The original residence that stood in the centre of the property was in use up to the time work was commenced, as the main kitchen of the hospital, with patients' rooms in two upper stories.

Through this residence and its connecting corridors, east and west, ran all the main services to the hospital buildings, i.e., steam flow and return, hot and cold water, fire, electric power, lighting and telephone lines, also some sewer connections.

Provisions for these services and for food conveyance to patients' buildings and to nurses' residence had to be made in a temporary passageway which was erected across the property south of the new pavilion. This was connected with a temporary kitchen established on the top floor of the old power house building (formerly a laundry).

The mortuary was also in the way of the new building, so temporary provision for that service also had to be made just off the connecting passageway.

Construction Noise Nuisance and Its Control

The disconnecting and reconnecting of such a great number of service pipes, in many cases several times, created a serious problem for the hospital administration, but these disturbances were no greater so far as patients' comfort was concerned, than were the noises created by some of the building operations.

Cost and time factors in connection with excavation work rendered necessary the use of both steam and gasoline powered shovels. Very simply constructed sound mufflers, designed by architects, did much to mitigate this nuisance.

The improvement was so noticeable that it can be assumed that the only reason why such excavating equipment is generally so noisy is simply because the manufacturers have not been compelled to quiet it to meet a public demand aroused to the harmful effects of noise nuisance.

Given time to make the necessary adjustments in their plant, any firm doing contract excavation work in the vicinity of a hospital could operate without any disturbance to patients, and the added cost of equipment, spread over a few jobs, would be so small as to be negligible. As with excavation machinery, so with other plant items in building construction, the muffling of noise only requires the common sense application of data made available by research engineers in many countries, especially during the past decade.

At this hospital the noise of riveting was entirely done away with by bolting all connections of structural steel-work on the job.

In this connection the question has been asked, why a steel framework in preference to reinforced concrete? This matter was carefully studied, and steel was chosen because of the smaller finished column dimensions in relation to the very limited length of building that could be planned between the existing buildings on the site.

The New Pavilion—Toronto Western Hospital

The experience with field-bolting on this work proves that noisy riveting, so objectionable in city structural steel construction, is totally unnecessary and should be debarred by civic building codes. Such an enactment would compel engineers and contractors to adjust their erection details to do away with all riveting on the job. That neither the strength of the work, nor the speed of erection need be sacrificed was amply proven on this job.

Advantages of the High Building

The many types of floor plans studied for this scheme indicated that more compact services to patients could be provided by going up in the air than by spreading the building over a larger area of the limited amount of ground space available between existing buildings.

This arrangement also made it possible to connect up existing departments in the old buildings with corresponding departments in the new pavilion at their respective floor levels. It also concentrates service rooms, etc., on the north side and preserves the entire south frontage for patients' rooms, which,

being all on the higher floors, are further away from street traffic and have an uninterrupted view over the city and lake. These features, together with the advantage of better control of sun heat temperature inside the building in summer, fully justify the radical departure from orthodox hospital planning in the orientation of the new building and carrying it to a height of sixteen stories from the basement below ground to the solarium at the roof level, with the machinery and elevator pent houses rising still higher.

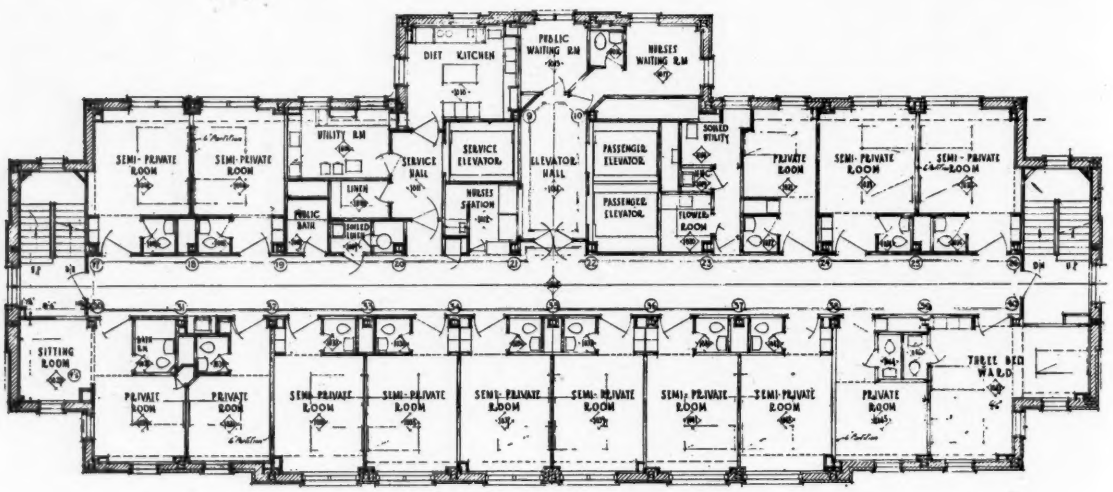
One of the chief difficulties encountered in carrying hospital buildings more than a few stories high is to avoid complication in the arrangement of the enormous number of pipes, ducts, wires, etc., both vertical and horizontal, required for the mechanical services in this type of structure. If the floor plans can all be more or less similar the problem is simplified, but when an operating floor comes over one for X-ray departments and private and semi-private

istration departments has greatly improved their appearance and also contributed to the safety of the public.

The driveway entrance to the new pavilion off Bathurst street provides ample parking space and an easy in and out circled road with a gentle rise that reduces the number of steps required to reach the rotunda in the centre of the south front of the pavilion.

Supplies enter the north court from Nassau street, and fuel is delivered from Leonard avenue via a ramp to the coal bunkers in the new power house at the east side of the property. The location of the new mortuary at this side of the hospital admits of entrance and exit from and to Leonard avenue entirely out of sight of the main hospital buildings.

Basement Floor—Storage for all classes of supplies received from the north court via a hoist at the central goods entrance, is conveniently arranged to the new service elevator in the centre of the pavilion



Typical Semi-private and Private Room Floor.

rooms are superimposed on larger wards for patients, problems arise that require very careful study in detail if the hospital administration is not to suffer.

Features of Plans

A new ambulance entrance giving more direct access to all the hospital buildings has been provided in the centre of Bathurst Street frontage under the steps that lead up from the street level to the administration floor.

The new roadway for this ambulance entrance swings off from the former Bathurst Street driveway level down and up a safe and easy grade, and the necessary re-arrangement of steps to the admin-

and to the new one in the connecting link between the pavilion and the Bathurst street building.

A tunnel also connects with the new power house, and via a ramp with the work shops provided in the old power house building, and with the mortuary and passage to nurses' residence.

Ground Floor Plan—In the pavilion the main features of this floor are the new main kitchen, special diet kitchen and formula room, where all food for patients and staff is prepared and delivered to the service rooms, from which it is transferred in bulk on trucks up the service elevators, or through the tunnel to the Alexandra Wing and Nurses' Residence, or direct into the special nurses' and helps' dining rooms, or by dumb-waiter to the dining room

for doctors, officials and visitors on the main floor above.

In the Bathurst street building, the space formerly occupied by the X-ray department has been added to the out-patient service and an admitting department at the new ambulance entrance and an emergency operating suite created in the center portion of that building.

This entrance also opens into a hallway adjacent to the new elevators serving the west end of the hospital and by corridor straight through the new pavilion connects with the Alexandra Wings and nurses' residence.

These changes in the location of the ambulance entrances have made it possible to improve and enlarge the out-patient and dispensary services on this floor.

Main Floor Plan—On this floor are the rotunda entrance to the new pavilion, business offices, combined board room and superintendent's office, physiotherapy department directly connected to one of the central elevators, doctors' coat rooms, and library and the dining rooms previously mentioned.

The restrained treatment of the rotunda and central elevator halls in walnut panelling, the travertine and terrazzo floors, simple plaster decoration, and the concealed panel lighting arrangement, all combine to create an impression of quietness, refinement and dignity well suited to the purpose of the building.

First Floor Plan—This entire floor is devoted to the X-ray and cystoscopic departments, also diagnostic examining rooms. The private waiting room south of the central elevators looks over the south court, and the public waiting room is adjacent to the west elevators behind the Bathurst street building.

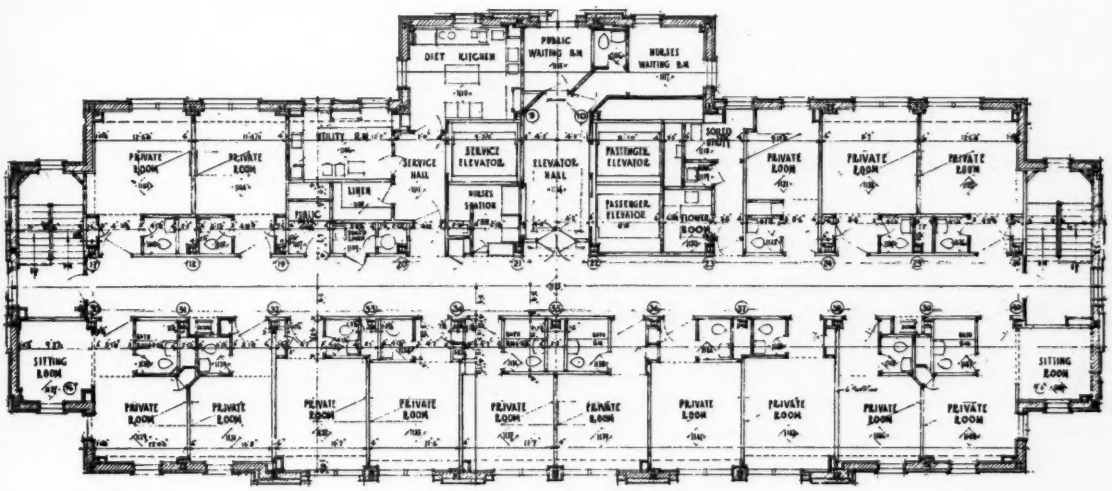
Second Floor Plan—Three major, two minor and one septic operating room with complete facilities for surgeons, nurses, and help to do their work under the most favorable and scientific auspices possible, take up the whole of this floor.

Third Floor Plan—Complete facilities for all the diagnostic and post mortem laboratory work so necessary in modern hospital administration are provided on this floor.

Fourth Floor—The eastern end of this floor accommodates the private obstetrical department with two major and one septic delivery room and two labor rooms, together with the necessary facilities for staff work.

At the western end there is the central supply department with complete facilities for sterilization and the preparation and distribution of patients' trays to all parts of the hospital.

Fifth Floor—This is the lowest floor on which patients are accommodated, and it is divided into wards of from two to five beds, with screens separating each bed.



Typical Private Room Floor.

The central location of the nurses' station and all service rooms, together with the limited length of the corridors makes for easy supervision of patients with a minimum of travel distance.

All service rooms for both clean and soiled utility work and diet services are shut off from the main corridor by additional doors leading to the supplementary corridors off which these rooms are placed, thus reducing noise disturbance, which is also minimized by acoustic treatment of corridor ceilings and upper walls, and in utility rooms, diet kitchen, etc.

Sixth Floor—This floor is devoted to private and

A Private Patient's Suite

semi-private obstetrical cases with babies' nursery department at the east end. The nursery has separate premature and isolation departments.

Seventh Floor—This also is for private and semi-private cases, and there is another nursery at the east end.

Here, as on other patients' floors, there is a small waiting room for friends and relatives just off the central elevator hall, and also a sitting room with lavatory for special nurses when not on duty.

Eighth to Eleventh Floors—These are typical floors for patients with private and semi-private rooms, a few of which have sitting room alcoves off private rooms with bath room en-suite. These alcoves can be used by the patients during convalescence, or by the special nurse or relative. They also make it possible to convert the suites into semi-private accommodation should the demand for beds necessitate such an arrangement.

Twelfth Floor Plan—This floor is laid out for children with private rooms and three-bed wards and a play room in the centre of the south front.

Solarium and Roof Terraces—Commanding a magnificent view all over the city and lake front, the large solarium is one of the features of the hospital. With sitting rooms, coat, and food service rooms adjacent, and roof terraces east and west, convalescing patients will find this accommodation quiet and restful.

For staff meetings or luncheons and other functions this floor with its remarkably good acoustical conditions will meet a long felt need in the hospital.

New Fourth Floor on Bathurst St. Building

Public wards in the north and south wings will each accommodate 38 patients, with the beds divided into groups of two and four by glazed screens. There are two quiet private rooms adjacent to each ward with the necessary staff service in the utility wings to the east off each ward and others in the centre portion of the building.

Construction of Buildings

Special attention was given by the architects to the rate of heat transmission through and the heat capacity of the structural walls, together with heat loss through windows.

Specially made insulating blocks were used for the backing of the walls, and to this cork was added.

Windows are double glazed, caulked and weather stripped.

Lighting fixtures of high efficiency, specially designed for this hospital, reduce power consumption in some departments by about fifty per cent, as compared with standard practice.

These carefully-worked-out details combine to reduce heat, light, and power consumption, which is one of the few factors in hospital management, the cost of which can be lowered from accepted standards.

New Departures in Layout, Equipment and Furnishings

Operating Floor—In the case of our surgical layout we deviated from the usual procedure of locating our operating rooms on the top floor of the building, as it was felt that this accommodation was the most desirable space we had for patients. It was accordingly decided to locate our new operating rooms on the same level as the operating rooms in our present public building. In this way certain facilities for the surgeons could be made to service both buildings. By placing our operating rooms on the second floor of a fourteen story building, we complicated to a considerable extent the question of ventilating ducts and pipes of all sorts for the necessary services. It was felt, however, that the gain in efficiency would more than offset the additional cost.

A review of the floor plans will show our surgical set up with six new operating rooms and all necessary services in the new building. At the west end of the new building, which adjoins the public building, is located a large operating room with glass enclosed observation gallery. At this end we have also located a septic operating room complete with all facilities. These two rooms are available for use either from the public building or the private addition. Private operating rooms are located in the east end of the new addition on the same second floor level. Complete surgeons' lounge, locker room with shower baths, and wash-up room are available in this surgical suite.

We have centrally located our soiled utility and nurses' work rooms, and instrument room, so that

this unit can service the entire operating room floor with a minimum loss of time. There is also centrally located in the corridor at the nurses' work room, a thermostatically controlled solution cabinet in which solutions are always available at the correct temperature for the various operating rooms.

Obstetrical Department—On the fourth floor of the new building are located the obstetrical case rooms and all necessary services. These obstetrical rooms are acoustically treated throughout and are self-contained. The set up is very similar to the surgical floor, there being two labor rooms with all necessary facilities for the comfort of the patient; two delivery rooms with necessary scrub and sterilizing room; one septic delivery room, self-contained; surgeons' lounge and locker room, and nurses' locker and workrooms.

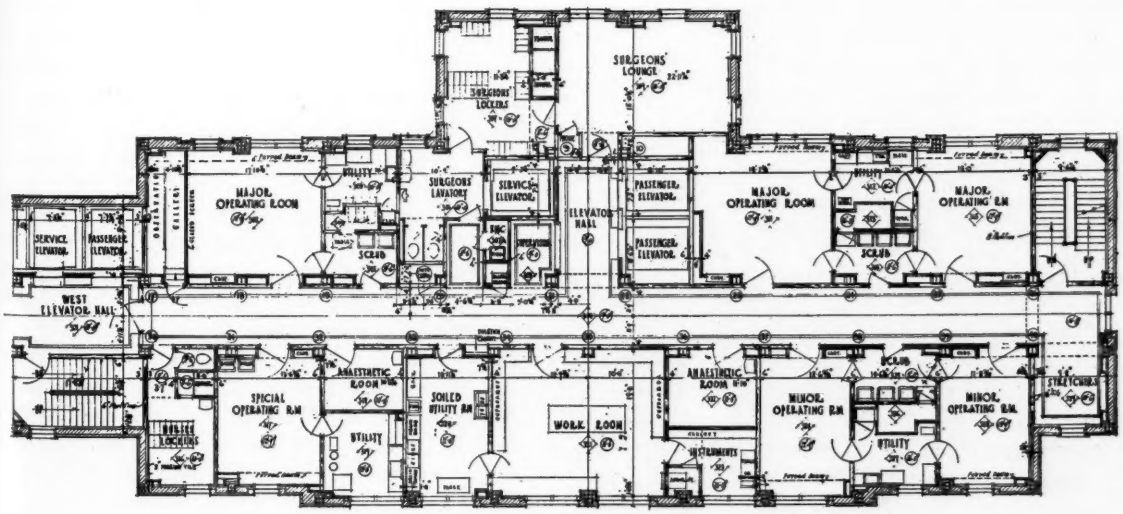
At the west end of this floor is our Central Supply installation, which is a complete unit, quite by itself.

X-Ray Department—The X-ray department for the entire plant is located on the first floor of the new addition, connected with the public building at the west end. Public and private waiting rooms are provided with elevator facilities to each. This department is so laid out that there is ample equipment available for every type of X-ray procedure, including deep therapy. In addition to the Radiological Department, the Cystoscopic examining rooms are located on this floor and are fully equipped in every way with complete X-ray apparatus, high frequency cutting knives and very latest type of hand operated and power operated cystoscopic tables. All electric control and water outlets are carried in conduit underneath the floor and come up at a central point in the table so that there are no tubes or wires of any kind surrounding the tables, leaving the space absolutely free for the surgeons and nurses working in these rooms.

There are many new features embodied in our X-ray equipment, some of this equipment having been developed for our particular layout. We feel that the set up as it exists will provide for the utmost in the way of efficiency. As this is a highly technical department a great deal of thought was given our problem by the X-ray manufacturers who co-operated to the limit with our Director of Roentgenology.

Laboratories—The laboratories for the entire plant are located on the third floor of the new addition, and here again we are tied in with the same floor in our Bathurst Street building. This department includes Pathology, Bacteriology, and Bio-Chemistry. A great deal of time was taken in the layout of these departments and equipment of the very latest type was provided for the use of those in charge of the departments. It is felt that with the efficient equipment available that the requirements of the greatly enlarged hospital plant will be adequately taken care of.

Central Supply—We have installed complete central supply set up with service elevators from each building opening directly into this department. It is planned that all treatment trays for the wards will emanate from this central point and will be returned for cleaning and replenishment after use. Separate glove room, solution room, sterilizing room, clean up space, storage space for goods ready for issue to the wards, and work room have been provided. In the space devoted for goods ready for issuance, there is a thermostatically controlled solution cabinet where



Surgical Floor.

solutions will be available at all times for issue to the wards, kept at the correct temperature ready for use.

It is felt that by centralizing all supplies and having the one staff prepare solutions and handle all supplies and treatment tray sets, that a very definite saving will be effected.

Food Service—The problem of our food service was studied carefully. Installations in various parts of Canada and United States were observed with a view to arriving at the very best method for a high building of this type. It was felt that while cubveyors with central service are excellent for certain buildings, in a high building it might be difficult to maintain proper temperature for foods with that type of service. It was accordingly decided that service pantries would be installed on each floor with a complete set up of urns, tray racks, heated dish cabinets, hot plates, and refrigeration, with high-speed elevator operating direct from the kitchen on the ground floor to each of these service pantries. Electrically heated food conveyors of the latest type are provided, one for each floor. The food is loaded from refrigerated or steam heated service tables in the kitchen to the electrically heated food conveyor and transported to the various floors and the food distributed from that point. The only exception to this is that all special diets are served directly from the special diet kitchen on the ground floor to patients throughout the hospital.

Kitchens—The kitchens are located on the ground floor having adequate light and forced ventilation. Fresh air is drawn into the kitchen at various points and when necessary heated or cooled. This air is also brought in over each door in the kitchen so that the possibility of odors escaping into the hospital at this point is reduced to a minimum. The exhaust from the kitchen is to the fifteenth floor penthouse. All equipment in the kitchen is of stainless steel and monel. The very latest types of steam cookers and other appliances have been installed. The bakery is a separate unit. All stores and refrigeration are located on the floor below the kitchen, individual refrigerating units being used at various points in the kitchen for storage of smaller quantities of supplies.

The kitchen is laid out for the efficient handling of food with a minimum loss of movement.

Oxygen Therapy—Arrangements were made for direct piping of oxygen to patients' rooms on three floors. The outlet for this oxygen in each patient's room is in a locked cabinet flush with the wall. This supply of oxygen has a master valve control for the various floors and it is felt that it will eliminate the great difficulty of transporting heavy oxygen tanks to the patients' rooms for the servicing of oxygen tents or intra-nasal catheter administration. Individual units are available controlling the supply of oxygen where intra-nasal catheters are used.

Nurses' Call System—Our call systems have been extended in order that more adequate service might be given to patients. On two floors we have installed an auxiliary dictograph nurses' call. This system must be considered as auxiliary to the regulation nurses' call which operates by means of a push button at the patient's bedside. This button illuminates a light over the patient's door, the room number being flashed at the nurses' station and also in the special nurses' room. In addition, on two floors a dictograph has been installed which permits the nurse to immediately speak to the patient as soon as the room number is flashed and ascertain from the patient what is required without the necessity of going to the patient's room. It is not necessary for the patient to pick up any other equipment such as a telephone or any hand piece but merely voice her request. The initial pushing of the button brings this equipment into play. All floors have been wired for this equipment but actual installation has only been made on two floors.

Doctors' In-and-Out Signal System—The doctors' in-and-out signal system has been extended to take care of return calls. This signal board with individual name plates is located in the corridor at the doctors' lounge on the main floor. A similar board will also be located at the Bathurst Street entrance. The master board is located at switchboard. The onus is placed on the doctor to press his own button, which illuminates his name plate indicating that he is in the building. This immediately illuminates the panel at switchboard. If he is shown as being in the building and switchboard has a call for him and is unable to locate him, she has what is called a return call button attached to her board which she presses and which brings a light into operation on the board where the doctor originally registered. This light remains lighted until the doctor registers out. He will then notice that there is a call for him and will communicate with switchboard. It should be noted that the onus is placed on the doctor to register in and out.

Telautograph—We have installed a telautograph system throughout the building, stations being located at the admitting desk, in the main rotunda, admitting department on the ground floor, every nurses' station in the private building, X-ray Department, operating floor, obstetrical floor and dietary department. This system will be extended to cover also the transmitting of doctors' messages, installation being at switchboard where by the throwing of one key and the writing of the particulars of the message it is automatically flashed to every station in the building and passed to the doctor wherever he happens to be

at the moment. It is felt that this system will save a great deal of time in the transmission of messages, admission, and discharge of patients and dietary extras, etc.

Air Conditioning — Air conditioning equipment, which includes the humidifying or de-humidifying of all air, has been installed for the treatment of air in the operating rooms, obstetrical rooms, fracture room, cystoscopic rooms and all nurseries. In addition, outlets have been provided in a number of the patients' rooms for air conditioning equipment which will permit the lowering or raising of the temperature 10° either way from normal. There is also an air outlet from every patient's room whereby the air is withdrawn by means of suction pumps situated on the fifteenth floor penthouse.

Room Furnishings—A great deal of study was given to the question of furniture for the patients' rooms. It is felt that it would be well worth the effort to see that each piece of furniture was planned for the particular place which it would occupy. How often have we seen hospital rooms that have been nicely planned but when buying furniture, equipment of an unsuitable type was placed in the rooms which defeated the purpose the architects had in mind when designing it. A room is so often spoiled by having furniture selected just a little too large to fit properly into the space provided, as it must be borne in mind that adequate space should be left for the purpose of handling patients in the room.

The result in the case of our new addition has, I think, been well worth the effort, as with specially designed furniture we seem to have more space than the actual room size would indicate. When we intimated to the manufacturers that we wished furniture especially adapted for our rooms we found them more than willing to co-operate with us, as they felt it was to their advantage, as well as our own, to have properly proportioned furniture, which created a harmonious room. Our bedside table and over-bed table were designed with one thing in view and that was to give the patient the maximum in the way of comfort and facility. All furniture has been planned to give service with a minimum of maintenance cost. We have used burn-proof tops on our tables and dressers and the furniture is rubber bumpered throughout. All our room furniture and other equipment was made up in a design and color scheme which was in harmony. Our wall colors have been kept to the pastel shades in an effort to get a quiet color harmony which would have a soothing effect on the patients. We have had bright pictures placed in each patient's room; those responsible for the room decorations felt that bright flowered prints would be the most satisfactory as they are of a nature that a patient would not tire of very readily.

Rooms are equipped with Venetian blinds and

A View of the Rotunda

colored drapes. The selection of drapes was placed in the hands of a small committee of ladies interested in the hospital, and they have achieved a very charming effect in these rooms.

Windows are all of the tilting type so that there need be no direct draft on the patient, but adequate ventilation is provided by means of the tilting feature. Each window is screened, full length, with a special type of screen which permits of easy removal when it is necessary to completely reverse the windows for cleaning purposes. This reversible feature does away entirely with the necessity of window cleaners working on the window sills and also does away with the necessity of installing window cleaning hooks.

Each room has a toilet and wash basin and a number of rooms are also equipped with tub baths and shower baths. It was considered advisable to eliminate the ordinary type of toilet with flushometer valves, which are more or less nosiy, and install toilets of a quiet type, with bedpan lugs and bedpan washing attachment. There is also a medicine cabinet immediately over each wash basin.

Electrical Outlets—We asked the electrical engineers to eliminate in so far as possible objectionable wires leading to various lights or other devices. We accordingly had all our outlets including night light, nurses' call, radio plug, telephone, and plugs for the use of X-ray or Physiotherapy treatments, on one single panel. We feel that this has made a very compact and satisfactory job. All rooms have been so designed that they make adequate private rooms or they can be immediately converted to semi-private. All fixtures and signals have been laid out on this basis.

Connection is provided for radio in each room panel and on request of patients they are permitted to use small portable radio with loud speaker. We

feel that this type of radio is much more enjoyable to the patients than ear phones, and it also permits of a better selection of programs. We have never experienced any difficulty, if a radio is objectionable to other patients, in having it toned down or closed off entirely. We do find that the patient when convalescing receives a great deal of pleasure from his or her radio installations. A number of portable units are available in the hospital for the use of the patients. Each room is equipped with cradle type of telephone.

Solarium—The 14th floor of the new extension is set up as a sunroom with open sun decks at either end. This is a large room 28x78 with glass on three sides. It is furnished in a very pleasing manner with bright chintz covered furniture and bright drapes. There is a complete service pantry adjacent and wash rooms are also provided. This room is for the use of patients or for any functions for which it might be required. Our doctors hold staff meetings and their monthly staff luncheon in this room. It will no doubt prove a very valuable asset to the hospital.

Lighting—Wherever possible we have eliminated hanging fixtures and have installed flush type lighting with reflectors, in order that we might secure the very maximum efficiency in lighting with a minimum of power consumption. The corridor lighting is particularly effective, being lighted from the sides of the corridor at the splade ceiling and not in the usual way from the center of the corridor ceiling. This gives us an even illumination down the full length of the corridor.

In the rotunda we have used a specially designed ceiling type of fixture and in addition panel lighting, using the new English tubular light for this illumination.

In our planning we have provided for all necessary services for the entire plant of 515 beds and 61 cots. This will replace all the beds which may be lost by the closing of our Grace Division and an additional 100 beds. It will also permit us to change our set up of accommodation in as much as we can now have public, semi-public, semi-private, and private beds. The main building on Bathurst Street is being altered in many respects, the old elevator and stairways being entirely removed from the center of the building and this used as rotunda space. The out-patient departments are being completely remodeled and the ward service on each floor is being increased and 80 beds added by means of an additional floor to this building.

I have merely touched on some of the special features of this building, as we felt that with the very great development in hospital equipment of all kinds that every advantage should be taken of any new ideas which have become apparent in the last two or three years. We feel that hospitals become obsolete all too soon and that if we are to maintain efficiency that we should keep abreast of the newer developments when an opportunity presents itself to equip a new building.

EDITOR'S NOTE

This new unit, presenting so many modern features of the architectural arrangement, has been so well adapted to the requirements of hospital operation that it constitutes a model well worth careful study by hospital architects, consultants, and especially those administrators who are considering construction.

Mr. A. J. Swanson, the general superintendent, and Mr. James Govan, the architect, and the contractors who built it, are to be congratulated upon the fine results of their labors.

The building of this unit, without serious interruption of service to the patients cared for in the older parts of the hospital, is a notable achievement in hospital construction.

Accounting Manual Attracts Wide Attention

The report of the Advisory Committee on Accounting, prepared under the title "Hospital Accounting and Statistics," has attracted wide attention among accounting practitioners and instructors. An article on uniform accounting for hospitals, by C. Rufus Rorem, appeared in the July, 1935, issue of the *Journal of Accountancy,* the official journal of the American Institute of Accountants. The American Accounting Association, composed of university instructors in the field, requested Mr. Rorem to present a similar paper at its annual meetings December 28th in New York City.

Conferences have been held in Chicago and in New York City to discuss the importance of accounting for hospitals and other social institutions; also to consider ways in which students of accounting can become more familiar with the problems of non-profit institutions during the period of college and university instruction. The conferences in New York and Chicago included official representatives from the following agencies: American Hospital Association, Chicago Hospital Council, Chicago Council of Social Agencies, United Hospital Fund of New York, Bureau of Jewish Social Research, New York School of Social Work, Community Chests and Councils, Inc. There were also present heads of the departments of accounting in the following universities: Baylor, California, Chicago, De Paul, Harvard, Indiana, Iowa, Loyola, Michigan, Minnesota, New York, and Northwestern.

The Distribution of a Hospital Dollar in General Hospitals During 1935

THE DISTRIBUTION OF THE HOSPITAL DOLLAR is always interesting study for hospital administrators. We are presenting, herewith, this distribution for 1935 as experienced in five hospitals of different sizes, types, and different geographical locations:

A Denominational Hospital—387 Beds

Dietary Foods	.1383
Administration	.1283
Nursing Care	.1166
Dietary Department	.1000
Heat, Light and Power	.0883
Medical and Surgical Service	.0783
Housekeeping	.0750
Laundry	.0433
Maintenance and Repairs	.0400
Laboratories	.0366
X-Ray	.0316
Pharmacy	.0250
Anesthesia	.0183
Nursing School	.0166
Emergency	.0150
Maintainence of Personnel	.0133
Purchase and Issuance	.0133
Medical Records and Library	.0083
Physiotherapy	.0083
Maintenance of Grounds	.0033
Social Service	.0016
	$1.00

A University Hospital—900 Beds

Dietary Foods	.1713
Administration	.0974
Nursing Care	.1463
Dietary Department	.0523
Heat, Light and Power	.0487
Medical and Surgical Service	.1206
Housekeeping	.0765
Laundry	.0376
Maintenance and Repairs	.0291
Laboratories	.0162
X-Ray	.0458
Pharmacy	.0384
Anesthesia	.0137
Nursing School	.0780
Emergency	.0000
Maintainence of Personnel	.0000
Purchase and Issuance	.0049
Medical Records and Library	.0047
Physiotherapy	.0063
Maintainence of Grounds	.0000
Social Service	.0122
	$1.00

A Denominational Hospital—225 Beds

Dietary Foods	.1554
Dietary Department	.0516
Administration	.1782
Nursing Care	.1484
Heat, Light and Power	.0757
Medical and Surgical Service	.0689
Housekeeping	.0758
Laundry	.0340
Maintenance and Repairs	.0416
Laboratories	.0268
X-Ray	.0332
Pharmacy	.0128
Nursing School	.0016
Maintainance of Personnel	.0622
Purchase and Issuance	.0040
Medical Records and Library	.0027
Maintainence of Grounds	.0154
Social Service	.0117
	$1.00

A Northwestern Hospital—125 Beds

Dietary Foods	.2238
Administration	.0688
Nursing Care	.1533
Dietary Department	.0473
Heat, Light and Power	.1333
Medical and Surgical Service	.0288
Housekeeping	.0800
Laundry	.0289
Maintenance and Repairs	.0288
Laboratories	.0270
X-Ray	.0269
Pharmacy	.0755
Anesthesia	.0488
Nursing School	.0155
Emergency	.0133
	$1.00

A Northwestern Hospital—137 Beds

Dietary Foods	.2830
Administration	.0576
Nursing Care	.1695
Dietary Department	.0559
Heat, Light and Power	.1332
Medical and Surgical Service	.0200
Housekeeping	.0920
Laundry	.0266
Maintenance and Repairs	.0339
Laboratories	.0218
X-Ray	.0121
Pharmacy	.0484
Anesthesia	.0242
Nursing School	.0169
Emergency	.0049
	$1.00

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E-D-I-T-O-R-I-A-L-S

Better Times Ahead

In 1929 the average voluntary hospital had an average of 67.4 patients, an occupancy rate of 75 per cent. In 1932-1933 the occupancy rate fell to an all-time low. In 1934 the average bed capacity of our hospitals increased to 101, and the average patient occupancy to 59.32, and the occupancy rate of 58.8 per cent, with a substantial increase of non-paying patients and a smaller decrease in paying patients.

Coincident with the increase in non-paying patients was an abnormal increase in the cost of staple commodities used in hospitals. The constantly widening gap between hospital disbursements and hospital income was retarded, but not stopped, by important retrenchment in maintenance and repairs, greatly curtailed purchase of fixed equipment, and material reduction in salaries and wages of personnel. All these were temporary expediencies which could not continue to operate indefinitely.

In the spring of 1935 there appeared the first general evidences of a returning improvement in hospital income and occupancy together with a noticeable improvement in community financial support. At the mid-year our reports were general that our hospitals were receiving more patients, that the collections of accounts were better, and that the semi-private and ward-pay accommodations were being better utilized. Toward the close of the year, the reports from all classes of hospitals, and from every part of the country, were more encouraging than since 1929. Private as well as semi-private and ward accommodations were being utilized and bed occupancy had increased to a better than 62 per cent average and earnings and collections were appreciably improved.

In increased percentages these figures do not seem large, but reduced to patients and income from patients, they are important. The addition of 3 patients each paying $5.00 per day for hospital care means an increased yearly income to the hospital of $5,475, which in smaller hospitals may mean the difference between a balanced budget and a deficit. The trends for satisfactory improvement in their fiscal affairs seem definite.

Not the least significant of these trends, is the disposition of charitable people of our communities to give to the support of our hospitals. While individual contributions are not so large, nor large contributions so numerous, the financial support given is more widely distributed and comes from a vastly increased number of donors. And this is as it should be. The larger the number of people who show their interest in the operation of our institutions, by contributing their support both materially and morally, the sounder will be the financial foundations upon which our hospitals rest.

As our hospitals recover and reach reasonable security, they will be able to make purchases of equipment which was needed. They can pay off current obligations, make alterations and repairs that have been neglected, and, most important of all, restore to satisfactory levels, the salaries and wages of employes where they have been reduced. They will be better able to care for the increased number of non-paying patients which these difficult times have imposed upon them, and by increased purchases, a larger employment of personnel at better wages, and a more extended activity in the relief of the sick poor, make a larger contribution to the common weal.

Will hospitals, when and as better times come to them, forget the lessons which depression has taught them? Will they launch upon extensive building programs, not needed, either now or in the future? Will they dissipate their income in extravagant and unnecessary dsibursements? Will their sins of the incontinent twenties be repeated, when happier days dwell with them? May a kind Providence forbid.

Thrift is a virtue whether practiced by an individual or an institution. To conserve resources which are intrusted to a hospital, either through generous donors, or through its earnings is a recognized responsibility. If our hospitals will pay as they go,

save as they can, and convert their surplus as it may come to them to the better care for more patients, and an enlarged use of their charity, they will never again be in the unfortunate situation they were found during the depression, and to which many hospitals themselves contributed.

A Friend of Our Hospitals

The *Saturday Evening Post* has always manifested an interest in all hospitals. In an understanding and sympathetic manner it has brought to the attention of its readers, through timely editorials, both the service which our hospitals are rendering the public and the necessity for continuing public support of our institutions, particularly our voluntary hospitals.

In presenting to its readers such editorials as "Our National Hospital Emergency," "The Plight of Our Hospitals," and "Hospitals in the Red," the *Saturday Evening Post* has rendered a conspicuous service to our hospitals.

In reply to a request for permission to reproduce in HOSPITALS the editorial of January 18, "Hospitals in the Red," its Editor, George Horace Lorimer, said:

> "Dear Dr. Caldwell:
>
> "Many thanks for your note of the 15th. It is a great pleasure to know that our editorials on the condition of our hospitals have been finding such appreciative readers. There is no objection to your quoting 'Hospitals in the Red' either wholly or in part in HOSPITALS.
>
> Yours very truly,
>
> GEO. H. LORIMER."

Our readers are invited to study the editorial, "Hospitals in the Red," reproduced on the inside back cover, and bring it to the attention of the people of their communities.

The Need of Convalescent Homes

The question of the provision of adequate facilities for institutional convalescent care has not been given the attention which it needs and deserves. Pioneer efforts on the part of a few, however, have amply demonstrated that the favorably located, adequately equipped, medically supervised institution for the care of convalescents is an invaluable community asset.

Studies in hospital economy have shown that many patients who have passed the acute stage of illness and no longer require the continuous medical and nursing care of a hospital may fare better in a suitable convalescent home. The early transfer of such patients not only reduces the maintenance of such a patient by at least fifty per cent, but makes available the hospital bed for others who are acutely ill and require hospitalization. Many a city would have been saved the investment in and upkeep of a costly hospital, if provision had been made in time for a convalescent home.

Less tangible but even more important dividends expressed in terms of better in the end results of medical care and the prevention of human waste accrue from the provision of adequate convalescent care for the thousands who through the force of circumstances must leave the hospital while still unfit to resume their regular life routine. It is good social economy to recognize the high correlation which exists between contentment, health and human efficiency, all of which may be jeopardized through a premature return of the patient to his old routine. It has been stated on good authority that after an acute illness most patients require a period of convalescence at least as long as the duration of the illness itself.

The atmosphere of a convalescent home should be as different from that of a hospital as it is possible to make it. The convalescent home should provide an environment of ordinary life. For this reason, if no other, so-called chronic patients should not be admitted to a convalescent home, whose primary business is to restore people to normal ways of life. The fundamental differences which exist in the psychological and other aspects of the two questions make it undesirable to combine the care of convalescents and the care of patients afflicted with chronic ailments.

Much groundwork still remains to be done in preparation for the long overdue expansion which may be predicted, with regard to both the provision and utilization of institutions for convalescents, in the future. Aims and purposes must be better defined, standards established, principles and practices better determined. Personnel must be developed and provision must be made for adequate support and supervision, as well as for a close tie up with social

service agencies. Above all, the active interest of the medical staffs of the hospitals must be enlisted in the problem. It is also most important not to think of a convalescent home in terms of a glorified country boarding house.

* * *

Maternity Cases in Hospitals

Over 700,000 babies are born in the wards of our hospitals each year. One out of every three babies born in the United States comes into the world in the quiet and cleanliness and with the professional competency of our hospital delivery rooms. One out of every three mothers is confined under hospital conditions and care in an environment where obstetrical art is best applied and obstetrical hazards minimized.

Accouchement even in normal uncomplicated pregnancies must be regarded as a major procedure. Its hazards are increased unnecessarily when the patient is denied safeguards from potential infection or where every facility required for taking care of any unforeseen emergency is not immediately available to the attending obstetrician. Both expectant mother and her infant should have every security that good professional attendance and good hospital care can provide.

Much has been said and more is being written in the advocacy of obstetrical practice in the home. A national publication appealing largely to women readers has engaged a lay writer of prominence to prepare for public consumption a series of articles on this subject. The obvious result of the discussion of a major operating procedure, involving the lives of both mother and babe, by a layman who has little knowledge of medicine and none whatever of the science of obstetrics, will be to lead prospective mothers into a false sense of security, and do a serious injury to good obstetrical practice.

Both the maternal and infant mortality rate in the hospital is less than in the home, particularly so when consideration is given to the condition of patients sent by their physicians or coming to the hospital obstetrical wards of their own accord. Hospitals have provided the best possible facilities and the best professional services, both medical and nursing, for the delivery of the mother and for her care before, during, and after her confinement. No unskilled hands assist the doctor in his work, no friendly neighbor drops the ether, when an anaesthetic is desired, no incompetent unfamiliar persons attends the babe when it is born into the world. But competent experienced physicians and nurses ease the anxiety of the mother, quiet her discomfort, and bring her little baby safely into the world. Whether rich or poor, both mother and babe receive the best of care.

After delivery the mother is given a careful examination; repair, if any, is accomplished under proper technique, the proper post-delivery dressings applied, and she is quietly moved to her room to enjoy a restful sleep. The babe is bathed and dressed, and after saluting its mother is taken to the well-ordered nursery to start on its way to health and strength.

Again, every child coming into the world is a pediatric problem; many of them present a surgical phase. In the hospital the indicated professional service is called upon immediately; in the home this service is delayed, and often not made available. Even in the best of arranged homes, things are vastly different than in the obstetrical services of our hospitals.

But the practice of obstetrics in the home, when attended with all its difficulties, is frequently followed by sequelae that are of more concern to the mother in later years than the delivery of her child. The obstetrician in a large percentage, if not in a majority of deliveries in the home, has seen his patient but once or twice, and often for the first time when he is called to wait upon her. He can know but little of her clinical history, he has had but a short time to study her case, and he is confronted with a lack of information which every competent obstetrician deplores. He has a bed for a delivery table, a tea-kettle for a sterilizer, a dishpan in which to boil his instruments, and the lavatory as his scrub-up room. His patient has not been properly prepared. Friendly, eager, but incompetent hands, stand by to assist him, and he starts his good offices with a hope in his heart that his patient will come through safely and an earnest wish that he and his patient were where they should be, in the delivery room of some good hospital.

There are few physicians engaged in the practice of obstetrics, either as a specialty or as a part of their general practice, who do not prefer, if they do not insist, that their patients go to the hospital for the period of their confinement. None at all but who would want every necessary facility including good professional assistance within easy reach in the event of an unforeseen hemorrhage, eclamptic seizure, or any of the serious emergencies that he might have to confront during or following delivery. The hospital provides for all of these, the home can provide but few, if any.

Every gynecologist recognizes daily among his patients, the lasting and often irremediable conditions that condemn them to a life of semi-invalidism, all of which have had their origin in bad obstetrical practice. Thousands of women are living invalid's lives because of faulty or neglected obstetrical technique under conditions as found in the patient's homes.

Hospitals are improving their maternity services in every way. The American Hospital Association has ready for printing and distribution a "Manual of Maternity Care," prepared by its Council on Administrative Practice, and which has been studied and approved by the official representatives of all of the organized medical services. The obstetrical service in our hospitals surrounds the mother and babe with every security that good technique provides.

For reasons of safety, comfort, care, economy and every other conceivable reason, our hospitals and not the home should be the place in which children should be born and their mothers nursed back to health and strength.

* * *

The Mounting Costs of Hospital Care

In the annual returns of member hospitals so far received for 1935, a large majority are reporting an increase in operating disbursements. Not only the patient day cost, but the total cost of operation show an increase over previous years. There are many reasons for the mounting costs of hospital care. Among them, are the increase in the cost of commodities; the shorter hours of labor in many instances; the gradually restoration of salaries and wages in those hospitals which had reduced their payrolls; an increase in personnel, the accomplishment of needed alteration and repairs, and the replacement of equipment.

But added to these natural causes are many others that do not directly apply to the bedside care of the patient, to the food and housing and the professional service which is provided. The old conception of a hospital that it was established, organized and operated "for the care of the patient and for no other purpose" has passed into the limbo of forgotten things. Hospitals have voluntarily added research, education and often the rehabilitation of its patients to its stated functions, each of which has brought an increase to its cost of operation without any added revenue. Other functions have been imposed upon them, less directly concerned with the care of the in-patient, for the very good reason that the hospital was the best organization to guide and direct these activities for the public good. Again all of these activities add to the operating costs without any compensatory return to the hospitals' income.

The provision of board and room, proper diagnostic and therapeutic equipment, and efficient nursing and professional care for the patient is the obligation of the hospital. Education, research and rehabilitation to some extent, at least, are the responsibilities of the hospital. The altruistic services of the hospital other than these are in the interest of the public welfare, and whether their cost of operation is a legitimate charge against the hospital income or not is debatable.

It is hardly reasonable to assume that with these added functions that the costs of operation will not grow larger. But hospitals may give serious thought to the distribution of these added costs among the welfare bodies which they serve the most, and with the division of costs of carrying on these activities the hospitals would be able to maintain the operating costs and the charges to the patient for hospital care within reasonable limits.

The public in the past has been very generous in its investment in the capital costs of both voluntary and tax supported hospitals. Its further generosity must be requested in an investment in the operating cost of our institutions, at least to the point where particular activities of the hospital are for the general good, leaving the ordinary revenues of the hospital to be applied to the care of the individual patients.

Hospital critics direct their verbal assaults on the costs of hospital services and the charges made for the patient's care. The dollar can never be a measure of good hospital service. This they never seem to understand. They give small thought to the variety, length or character of the services rendered, all meticulously coordinated for care of the patient. They are forgetful of the role of the hospital in medical and nursing education, in preventive medicine, in medical research, in the many other welfare activities in which the hospital is constantly occupied, each of which is an expense to the hospital and adds materially to the cost of operation.

It costs in round figures $7.10 a year for each of our country's inhabitants to provide for the operation of all the hospitals, public, voluntary and privately owned in this country. Health is purchasable now as it has always been. It is a commodity universally desired and needed. Can any other commodity be purchased at so small a cost?

Hospital Lighting

WILLIAM HENRY WALSH, M.D., F.A.C.P.

Hospital Consultant, Chicago, Illinois

It is difficult to understand why such an important factor as lighting in hospitals, both natural and artificial, receives so little intelligent attention, but the fact remains that a considerable number of otherwise well-planned institutions show a most deplorable lack of suitable and efficient illumination.

It would seem desirable, therefore, to preface these remarks by advancing the proposition that the illumination of a hospital, constituting as it does, one of the most important factors affecting comfort, efficiency, and esthetics, is a detail which deserves the careful study and final approval of those who are primarily concerned with the technical work of the hospital. If a competent consultant is not associated with the project, then the superintendent of the hospital or a committee of the nursing and medical staff should examine the specifications, the illustrations and, if necessary, samples of the fixtures proposed for every location in the hospital.

General Considerations

The same principles of correct general illumination which apply to any other type of building, likewise apply to hospitals, but because of the peculiar nature of the latter and the highly specialized procedures conducted therein, it becomes necessary to also furnish varying types of special equipment to meet these requirements.

Perhaps the most important consideration in any lighting scheme is to avoid glare, so ceilings, walls, and floors must be given due attention when the type and the intensity of illumination are determined. Thus, color harmony to produce soft, subdued light effects where these are highly desirable must be coordinated with the lighting system.

Whether for office, home, or hospital, lighting must be sufficient in intensity to provide quick visibility, but diffusion must be such as to eliminate bright light sources, the objective being to aid visual acuity in such manner as to be conducive to physical comfort and mental serenity. Certainly non-irritating, adequate illumination properly controlled is of equal importance to the hospital patient as efficient nursing and proper diet. Too often good lighting is interpreted to mean high intensity, and the resulting glare, whether direct or reflected, not only adversely affects vision, but causes physical discomfort. The ideal is to so regulate the intensity, the location of the source, and the spacing of the lights that the illumination will be soft and pleasing.

The approximation to shaded daylight is the goal to which we should strive for general artificial interior illumination, although it is realized that artificial daylighting on a large scale is seldom practical from the standpoint of initial and operating costs. It will be well to remember in this connection that natural lighting for hospitals is of equal importance to artificial, and the clever designer in hospital practice will seek methods and means to furnish the largest degree of daylighting possible. But this is another story involving structural details in planning.

There are a few requirements for general lighting in hospitals which must have special attention, the first of these being the necessity for the use of fixtures which may be readily cleaned and that are as nearly dirt-tight as possible, thereby assuring sanitation while preserving the normal efficiency of the lamps. Next in importance is the elimination of dark corners by locating lights of adequate intensity in all out-of-the-way places. Expert attention must be given to the arrangement of circuits so that both a minimum and a maximum service may be utilized as needed. This division of circuits especially applies to corridors, large wards, libraries, dining rooms and other locations where very dim lighting or full intensity for restricted areas afford convenience and economy. Finally, under general requirements, should be mentioned the desirability of selecting a type of fixtures which will permit in all cases the most complete utilization and distribution of the rated intensity of the lamp used, thus assuring the least possible current waste.

Determination of the Proper Degree of Illumination

The foot candle intensity* of surface illumination will depend upon various factors, not the least of which is the wattage of the lamp for each unit, and this can only be determined after the area to be covered, the spacing between outlets and the

*Note: The foot candle is the amount of light a standard candle will give at a distance of one foot and this is ascertained by a device called the "photometer."

mounting heights or the distance from the floor to the bottom of the globe or reflector of the fixture have been calculated.

Although it is impossible to arbitrarily set down the exact number of foot candles for a given purpose, Dr. Luckiesh* in a recent publication has suggested the following intensities for general application as the minimum, considering the economic, practical, hygienic and humanitarian aspects which are more or less involved in all lighting projects:

"Satisfactory for perceiving larger objects and for casual seeing, but the danger zone for severe tasks and for quick and certain seeing—0-5 Foot Candles.

"For visually controlled work in which seeing is important but more or less interrupted or casual, and does not involve discrimination of fine details or low contrasts—5-10 Foot Candles.

"For moderate and prolonged tasks of office and factory and when not prolonged, ordinary reading and sewing on light goods—10-20 Foot Candles.

"For moderately critical and prolonged tasks, such as clerical work, ordinary reading, common bench work and average sewing and other needlework on light goods—20-50 Foot Candles.

"For severe and prolonged tasks, such as proof-reading, drafting, difficult reading, watch repairing, fine machine work, average sewing and other needlework—50-100 Foot Candles.

"For very severe or prolonged tasks requiring exact precision, such as fine needlework, fine engraving, fine pen work, fine assembly, sewing on dark good, and discrimination of fine details of low contrast, as in lace making, weaving, darning and inspection—100 Foot Candles or more."

Various engineering societies, governmental agencies and others have worked out standards for the intensity of illumination for different classes of service and these may be found in numerous publications on the subject. There will be here submitted a table giving standards that have been found satisfactory in hospitals with which the writer has been associated. In this connection it must be remembered constantly that the degree of illumination does not depend upon the wattage of the lamp alone and is affected by the several factors above set forth, including the efficiency of maintenance.

Recommended Standards of Illumination for Hospital Interiors

Location	Foot Candle Intensity
Lobby	5-8
Offices	10-15
Waiting Room	5
Corridors and Stairways	3-5
Laboratories (General)	10-20
Library (General)	10-15
Clinical Records	10-15
Physicians' Locker Room	5
Dental Chair	30-50
Dental Waiting Room	5
Dental Shop	12-15
Elevators	8
Dining Rooms	8-10
Roentgenological Department	10-15
Fluoroscopic Room	3-10
Auditorium	10
Wards (General)	5
Private Rooms (General)	5
Operating Room	10-20
Operating Table	150-300
Emergency Light	75-125
Toilets and Washrooms	6-8
Utility Rooms	10-15
General Kitchens	10-20
Diet Kitchens	10-15
Treatment Rooms	10-20
Delivery Room	10-20
Delivery Table	100-200
Garage	5-8
Garage Shop	12-15
Night Lights	0.1-0.2

*Luckiesh, Matthew. Seeing and Human Welfare, Williams & Wilkins, 1934.

The next important point to consider is the type of lighting unit to be used and this factor has such a direct bearing on the light delivered that lighting fixtures should be accepted only after photometric tests prescribed by the Illuminating Engineering Society and conducted by an approved testing laboratory have certified to the illuminating efficiency and the degree of surface brightness expressed in candle power per square inch.

Types of Lighting

The distribution of light takes many and varied forms but may be generally considered in three fundamental classes which will be described under the following separate heads: "Direct," "Indirect," and "Semi-Indirect."* Recent modern tendencies toward built-in illumination, a radical departure from traditional practice, prompts the separate classification of "Architectural Lighting," which will also receive some comment.

Direct Lighting: Illumination which directs the major portion of the light downward is termed "direct" and when of great intensity it is difficult to prevent glare or irritating reflections from bright or glossy work surfaces. These disadvantages are met by shielding the lamp filaments with a shade having a reflecting surface which throws the light directly on the object to be seen, or, by diffusing the light, through the use of translucent materials enclosing or partially enclosing the lamp, thus increasing the area of light source, but reducing the intrinsic brilliancy.

There are certain conditions under which direct lighting is desirable and satisfactory, particularly where high intensity is necessary for specific purposes and economy is a vital factor. Light fixtures of this type assure the highest foot candle intensity

*NOTE: At the recent meeting of the International Commission of Lighting Engineers held at Berlin, August, 1935, the scheme of classification originally considered at Cambridge, England, was further amplified and the following table of classes was adopted:

CLASSIFICATION OF LIGHT DISTRIBUTIONS

Class	Characteristics
a. Direct	90% or more flux emitted in lower hemisphere.
b. Semi-Direct	Over 60% and less than 90% in lower hemisphere.
c. Mixed, or General	From 40% to 60% in each hemisphere.
d. Semi-Indirect	More than 60% and less than 90% in upper hemisphere.
e. Indirect	90% or more in the upper hemisphere.

per watt. While direct illumination meets certain needs in hospitals from the standpoint of efficiency and economy, it is neither suitable nor desirable in those sections occupied by patients or where comfort and restfulness are the primary considerations.

Total Indirect Lighting: This type of light fixture uses an opaque reflector inverted so as to direct the light to the ceiling and walls, from whence it is reflected into the room. The intensity of this type of illumination depends upon—first, the wattage of the lamp; second, the efficiency of the reflector; and finally, upon the height and color of the ceiling and the color of the upper walls.

Indirect illumination more closely approximates natural light than any other form and, with all conditions favorable, it meets most of the requirements for general lighting in hospitals, but unfortunately when this type of illumination is used in sufficient intensity for all purposes in wards or patients' rooms, the resulting brightness of the ceiling is likely to be annoying to the recumbent patient who should not be obliged to constantly look at the brightest surface in the room.

While totally indirect illumination when carefully planned finds many places in the hospital, it should be remembered that its greatest utility will be in those instances where it is desired to create a subdued, soft and evenly diffused general lighting atmosphere. It is less suitable, from the standpoint of efficiency or economy, where high intensities are required on the working plane or in those places where close reading, writing, sewing or other similar special illumination is required over extended periods.

Semi-Indirect Lighting: This is a combination of direct and indirect light in which the fixture directs the light both upward and downward. When properly designed this type of fixture finds more uses in the hospital than any other and can be made to distribute and diffuse the light so that a reasonably uniform foot candle intensity without glare may be maintained throughout a given area. A lighting unit of the semi-indirect type now extensively used in the Johns Hopkins Hospital, designed by Ferree and Rand of the Wilmer Ophthalmological Institute, very closely approximates the ideal for most hospital locations and by an ingenious arrangement of baffles presents the following advantages:

a. All glare is eliminated from the source.

b. Glare is reduced from the work to a minimum by diffusing the light before it reaches the work plane.

c. The unit is free from reflecting surfaces which deteriorate with use and quickly lose their reflecting efficiency because of the collection of dust.

d. The type of light distribution given by the lamp is retained to the greatest possible extent.

e. The ceilings, walls and objects in the working plane receive an even degree of brightness not objectionably different.

f. All of these results are accomplished with a minimum loss of light.

Both partial and completely indirect lighting fixtures lend themselves to refinements in decorative lighting design which may be accomplished by locating the fixtures in coves or cornices, on pedestals and standards, wall brackets, column brackets, etc., and, in various locations in the hospital, these methods permit the complete elimination of the ceiling lights.

Architectural Lighting: A very modern practice is to build the lighting into the structure itself by recessing the equipment into the walls or ceiling so that the diffusing glass is practically flush with the finished surface. Behind this is placed an inexpensive reflecting surface and the bulbs are mounted in sockets between the reflector and the diffusing glass. This method of illumination might be termed "direct" but because it is an integral part of structural design it would seem desirable to classify it separately. Very beautiful effects may be accomplished with this method, it lends itself to lobbies, dining rooms, meeting halls, and other such public areas, and when carefully designed need not exceed the cost of other types of equipment. There were some good examples of this method of lighting at the Century of Progress in Chicago, but perhaps the outstanding application of this modern trend

A totally indirect luminaire with reflectors inside metal bowl

to utilitarian purposes is the use of built-in lighting at the various stations of the Moscow subway.

Special Hospital Requirements

It has been stated that, in addition to the general lighting requirements common to all properly illuminated buildings, there are departments in a hospital which demand special treatment and an attempt will now be made to offer a few suggestions resulting from the experience of the writer gained by aiding in the compilation of the specifications, and by observing the actual results in about a dozen hospital projects completed during the last few years.

The Basement: This section of the hospital is utilized for store-rooms, morgue, switch panel room, kitchens, and various other utilitarian needs. For the store-rooms, close ceiling direct lighting fixtures are most suitable for general lighting, but when stacks of shelving are erected it is desirable to provide for special units with totally enclosing globes of the reflector-refractor or plain refractor type so designed that the vertical sides of the aisles are uniformly and brightly illuminated while the aisle itself is in a shadow zone. The same type lighting fixtures are very serviceable between library stacks, in record rooms, locker rooms and other similar places. In store-rooms the light switches should preferably be located on the corridor wall with a pilot light to indicate when lights are off or on.

Autopsy Room and Morgue: The correct distinction of the colors of tissues is of great importance in pathological work, and so, whatever special light is used directly over the autopsy table, it should be corrected for color by the use of glass having the approved spectral transmission. The light should be of adequate intensity, the rays must be convergent and the unit shadowless and adjustable. For general lighting in this room a ceiling fixture of the diffusing type is required. Refrigerated cadaver boxes may be vastly improved if each section is provided with a lamp which automatically lights when the door opens.

Kitchens: Here again general illumination is best provided by close ceiling units of adequate intensity, with glareless enclosing glassware. Special lighting units of vapor-proof type are usually required over ranges and bracket type fixtures with half shades are convenient over sinks and other utilities located around the wall space.

All ordinary refrigerators require inside lights which automatically light when doors are opened; heavy duty, walk-in refrigerators should be provided with vapor-proof ceiling lights controlled by outside switches with pilot lights.

Corridors and Stairs: The most appropriate fixture for corridors and stairs is the close ceiling type, of a more ornamental nature on the upper floors than in the basement. In all stairway fixtures there should be provided emergency circuit bulbs; also, in every corridor at least one fixture should be likewise equipped. Since basement corridors are seldom provided with adequate daylight it is all the more necessary to provide sufficient artificial light to meet the needs of heavy daytime traffic. Basement light circuits should be so arranged as to provide full lighting intensity when needed and a low intensity at other times. Close ceiling fixtures of the commercial direct type with translucent diffusing globes are suitable for these corridors.

Main Floor: Exterior lighting standards should be designed to offer a pleasing appearance as one approaches the hospital. Because of constant exposure to the elements, the specifications for these fixtures must be such as to assure long life without expensive maintenance costs. Various bronze formulae have proved most satisfactory for the standards in the past, but of recent years other metals such as stainless steel, and aluminum have become popular and appear to serve the purpose. These fixtures must be installed in such manner as to be waterproof and bolted in place by rustless bolts, thereby precluding the possibility of rust stains. Only the best quality standards and the most expert workmanship should be considered in the planning of ornamental exterior lighting. Lanterns should be equipped with high wattage bulbs for use on special occasions and lower wattage for all night use.

Directional and Exit Signs: Illuminated directional signs are most desirable to indicate the location of various departments and also for exists, all of which latter should also be equipped with an emergency circuit bulb. The type of exit fixture should suit the particular location, there being a choice of the surface, the recessed, pendant, ceiling or bracket types. Where the law requires gas illuminant, the choice may be restricted to brackets. Ordinarily the glass should be red, with white letters etched, and of a size to be clearly visible, although low wattage lamps should be used. If desired, red letters on a white background may be used.

Other departmental directional signs may be of the suspension, wall flange, flat wall, counter or window types and may be either single or double faced, but in all cases the lettering should be white on a dark background and the tubular type lamp is required.

Lobby: Here it is desirable to strive for a decorative effect in design and soft, pleasing and restful illumination. It is in this location that artistic taste

may be exercised in the use of indirect lighting with the source concealed in wall brackets and behind cornices. The intensity of the reflected light here should not be great enough to meet special requirements and so auxiliary lights will be usually required at the information desk, at the cashier's window and other such places where close work is performed. Built-in illumination of the type described under "Architectural Lighting" may be ingeniously used here to produce pleasing effects.

Offices: There is a difference of opinion as to the relative merits of wholly indirect and semi-indirect lighting for offices and the observations of the writer lead him to the belief that the differences of opinion arise because of the marked variation of visual acuity amongst different people. It has been noted that in some offices, with what appears to be adequate indirect illumination for most of the workers, a certain proportion of them will demand special desk lamps and, unless they are provided, there results a loss of efficiency in work. This situation has been improved by the use of semi-indirect luminaires which provide more direct illumination and require less wattage. Separate desk lamps are objectionable for many reasons but there are many hours when only one desk in a large office may be in use and for these occasions a single desk lamp is useful; adequate provision for convenience outlets for these and other purposes must therefore be provided.

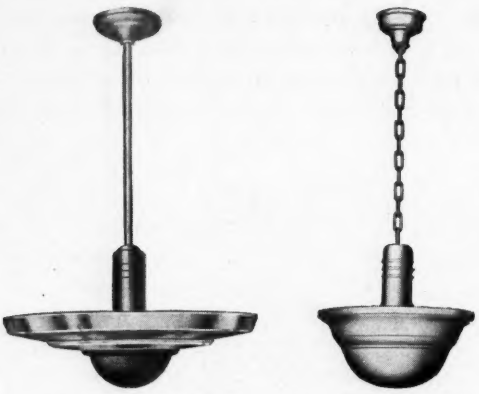
Combination Lighting Fixture and Fan: In many rooms, such as examining rooms, treatment rooms, dark rooms, and other places where it is necessary, because of the need of privacy, to work in rather closed quarters, it is desirable to provide some means of circulating the air. To meet this need a very satisfactory semi-indirect lighting fixture with a specially designed fan attachment is available and has proved far more satisfactory than the ordinary oscillating direct blast type. This type fixture is also useful in offices and even when located directly over a desk it will not blow papers around.

Main Corridors: The corridors on the main floor should have some decorative treatment and this can best be accomplished by the use of fixtures suspended from the ceiling, particularly when the ceiling on the main floor is higher than other floors. Various types of the semi-indirect or complete indirect fixtures may be used but the former will be more economical. Again circuits should be arranged so as to permit a minimum lighting effect when the amount of daylight meets the needs, or after midnight when full lighting is not required. Directional signs should be generously used on this floor.

Combination light and fan installations for offices.

Dining Rooms: There should be a cheerful aspect to a dining room and the illumination may contribute much in that direction. Ordinarily the lighting does not have to be of sufficient intensity for prolonged close reading, but it should be such as to permit the reading of a newspaper without strain by a person of normal vision. All glare should be eliminated and

the lighting units should blend with the room decoration. A suspended fixture of the semi-indirect type seems preferable here, but when the ceiling is very low, it may be necessary to use either close ceiling lights which do not offer a very pleasing appearance, or provide indirect wall and column brackets with an occasional pedestal light, keeping in mind, however, that this latter decorative treatment will involve greater expense than the former for equipment and maintenance. Built-in direct illumination may be effectively used in dining rooms



Semi-Direct Fixture **Direct Fixture**

and affords an opportunity to secure various decorative effects.

For decorative purposes on certain occasions a pleasing effect can be produced by placing small lamps on the tables around the walls and so baseboard receptacles should be provided where they may be needed.

Roentgenological Department: The fixtures for the various rooms in this department should preferably be of the direct, close ceiling type with diffusing globes, thus eliminating the possibility of interference from high tension wires. Convenience outlets for shadow box, stereoscope and other portable apparatus should be plentifully provided on the baseboards or walls. The fluoroscopic room general lights should be of dual control so that they can be operated by a foot pedal at the fluoroscope. Two intensities, one full and the other low, the latter of an orange shade, are necessary in this room, and preferably three, a low, intermediary, and full. In the transformer room a wall bracket light with diffusing globe is preferable.

Dark Room: This room requires for general purposes first a suitable light of indirect type controlled by a separate switch not too readily accessible as this light is never used while the room is in operation. All other lights should be located for convenience and must be photographically safe, which can be accomplished by the use of either the red or yellow-green filter. There are special lamps available for this purpose which provide adequate illumination of a safe quality provided the bulb used is not of too high wattage and the distance between the films and light is sufficient to prevent fogging of sensitized materials. The margin of safety for drying sensitized films should be at least one half minute exposure under a safe light without fogging and, since it is never necessary to expose dry films for that length of time this appears to meet all requirements. The safety of darkroom lighting should be carefully checked from time to time by exposing various lengths of a film in the safety light and noting the results. The maze or labyrinth leading to the dark room should be provided with a ceiling type lamp of a ruby red color. Fixtures of the night light type located about 18 inches above floor with louvres directed downward and the same below ceiling, with louvres directed upward, are very satisfactory for dark rooms, the lamps to be equipped with red or yellow filters.

Toilets and Washrooms: These rooms should always be provided with adequate daylighting but of course artificial light of medium intensity is required. Considerable saving can be effected in the cost of current if the ceiling light used here is provided with bulbs of medium and low intensities so that the full illumination need only be used when occasion demands. Occasionally a bracket light with diffusing globe may be desired over the mirror, particularly in women's washrooms, but this is not absolutely necessary and may be omitted where economy is vitally important. When ceilings are very high a pendant fixture should be used.

Library: Here again there is a wide difference of opinion as to the most effective lighting, but the decision in each case should rest upon the size of the room and the extent of its use. Wholly indirect lighting for general purposes here gives a pleasant effect, but when of sufficient intensity to meet special purposes the library ceiling will be too bright for comfort. Either semi-indirect lighting for all purposes or totally indirect for general, and separate shaded lamps for desk use will be the choice but the former will probably be more economical. If there is a stack room, the special unit with totally enclosing globes of the reflector-refractor type, designed so that the vertical sides of the aisles are uniformly and brightly illuminated, should be used.

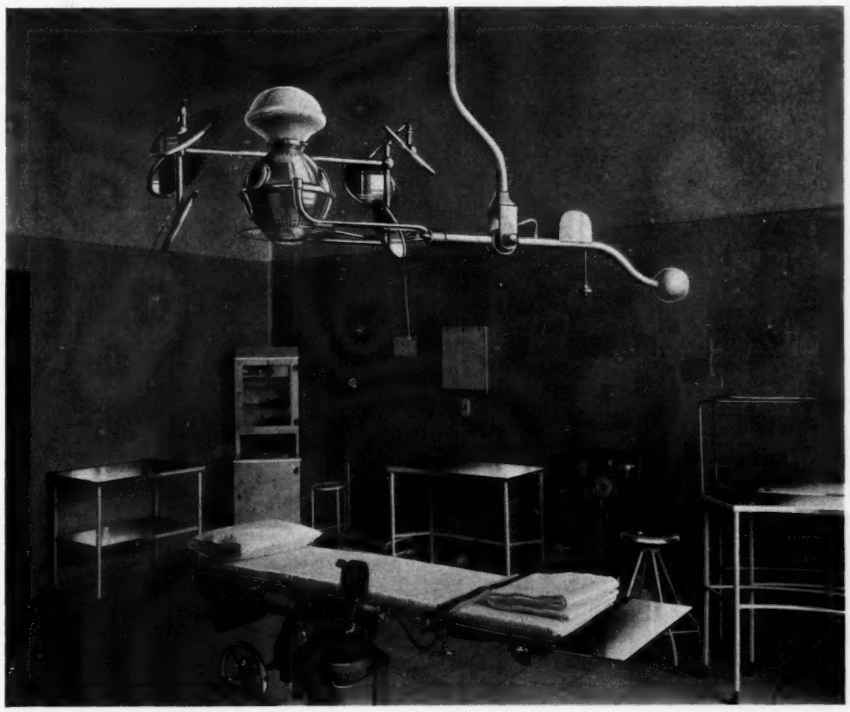
Laboratories: A fairly high level of evenly distributed general illumination is desirable for the various rooms of this department which can probably best be attained by properly spaced semi-indirect luminaires. Separate microscope lights and

other special lamps may be required on laboratory tables and so convenience outlets should be provided in the walls. Fume hoods, microtomes and other technical apparatus requiring direct illumination should be provided with fixtures made fast to walls when possible, but provided with adjustable swivel brackets to permit the widest adjustment.

Physical Therapy Rooms: When low walled cubicles are used general indirect ceiling illumination of low intensity for the entire area will be satisfactory, but when there are small separately partitioned rooms, corner brackets for indirect lights of low intensity give a comfortable light for patients who have to remain in these rooms for considerable periods. Electric outlets should be provided in every room for both direct and alternating current, but so designed that only the connecting plugs of the proper circuit apparatus will fit. Because high wattage lamps are used here care must be taken to install adequate wire capacities and fuses to carry the load. Although signal lights have not been elsewhere discussed in this article, it is desired to stress the necessity for a suitable signal light for every cubicle in this department.

Dental Rooms: The dental waiting room may be illuminated with a suspended fixture of either the direct or semi-direct type. For the dental operating room the same type of luminaire may be used for general purposes but for the dental chair there will be required a high intensity light shaded by special glass with refracting and diffusing prisms. These lamps are generally used in clusters of four and seem to be preferred over all other types by most dentists.

Surgical Operating Rooms: It has been the traditional practice to provide a northern exposure for operating rooms and very wide windows which have sometimes extended from floor to ceiling, and even over the roof, to provide sky lighting. The construction and the design of these windows presented many problems which have yet to be satisfactorily solved; heating costs are increased excessively, the architectural lines of the structure with such windows are frequently ruined, and after all, no matter how much daylight is provided it is at best of irregular intensity and on many occasions completely absent. Because of these facts and the imperative need of dependable illumination, of even intensity, at all times, various types of special artificial lights have been devised for these locations which are more satisfactory to most surgeons in the long run than the undependable daylight. The tendency is growing in modern hospital planning to treat the windows of operating rooms exactly as in



Operating room Installation with combination operating light and general room illumination.

other rooms and to provide such artificial illumination as will fully meet the exacting needs of surgical work.

There are a number of excellent special lights for operating rooms from which a selection may be made, but before making a final choice it will be wise to give the surgeons some voice in the matter. No matter what special lighting apparatus is installed it will be necessary to provide general utility lighting for the room, and the close ceiling direct light with diffusing globe is here recommended, unless the ceiling type of lighting with prismatic plates or reflectors is used for all purposes. While this latter type of operating room illumination is satisfactory, it involves rather high original cost, requires constant attention and consumes an enormous amount of current.

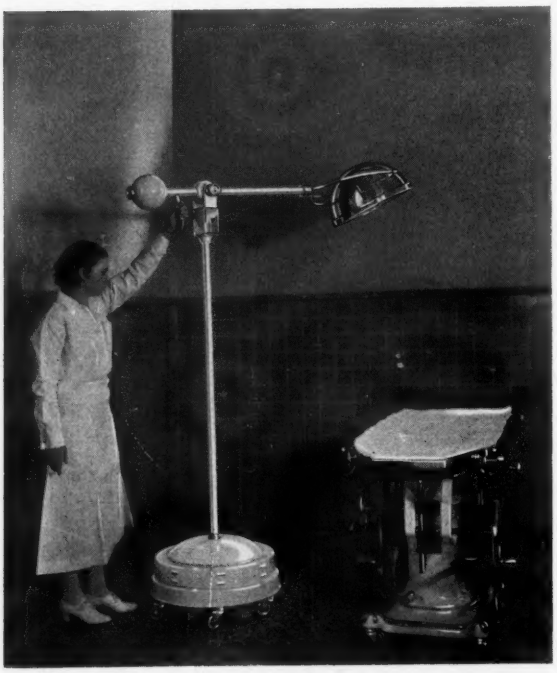
The following requirements should be met by an operating room lighting fixture:

a. A constant intensity up to 300 foot candles should be at all times available with a variable dominant direction to the light.

b. The lamp should be designed so that more than one filament is available in the event of the burning out of one.

c. Shadows should be either entirely eliminated, or minimized.

d. There should be no glare and provision should be made to eliminate heat.



Emergency light with battery attachment.

e. Lamp should be capable of correction for color with approved spectral transmission glass.

f. Reasonable cost of installation, operation and maintenance.

In addition to the fixed special light provided for the operating room, there should also be provided a portable emergency flood light connected with the emergency system of the hospital, or operating independently on its own batteries, in which latter case the batteries should be tested at regular intervals. This emergency light should be so designed that it will automatically light when the regular current is interrupted.

Obstetrical Rooms: For the waiting labor rooms a soft indirect light is desirable, but since it occasionally becomes necessary to deliver in the labor room, it is wise to provide either a high intensity on the general light or a portable spotlight. The delivery rooms present much the same problems as the operating rooms and a number of the special lights suitable for that location are equally useful here. In any event, however, a more horizontal light is required and so a portable spotlight should be always available. Again the need for a reliable emergency light is imperative and this situation should be met in the same manner as for the operating room.

Mercury arc switches should be used in all places where it is desired to avoid a spark and also where silence is desired, since these switches are sparkproof and noiseless.

Wards and Patient Rooms: With the rather wide choice of lighting equipment now available it is inexcusable to expose the helpless sick to the discomfort of glaring light. There are four essential requirements for lighting rooms occupied by recumbent patients—first, the general lighting which should be adequate to thoroughly illuminate the room but of such intensity that it does not tend to fatigue the eyes of the patient; second, the general lighting should be so devised that a dimmer light may be used when full lighting is not required; the third requirement is for special lighting at the bedside, since any lighting unit that is adequate for both general and special purposes is likely to be too intense for comfort. The fourth requirement is the very dim light for night purposes only, with the source located below the line of vision of the patients.

For the general lighting of wards and rooms either luminous indirect or the semi-indirect luminaires already mentioned under those headings may be used. In either case the luminaire must have both full and low intensities. For the bedside the light should be detachable, and particularly in wards,

A Particularly Good Example of Architectural Lighting

must confine the diffusion of light to the bed to which attached. No permanently fixed wall light yet devised is suitable for bedside lighting in wards. When this type equipment is once installed, it fixes the position of the bed to a particular area which, under some circumstances, is undesirable. For private rooms instead of the unit attached to the bed, a more decorative effect may be given the room by the use of a semi-indirect table lamp properly shaded. When lights are attached to the bed they should be so designed that they may be sufficiently extended for reading comfort when the spring and mattress are raised to an inclined position. The bedside unit will be much more useful if the lamp is capable of changing intensities, if it can be moved to any desired position for the close examination of the patient, and if it can be corrected for color by the use of a removable glass globe having the desired spectral transmission. The final consideration is night lighting and for this purpose the recessed unit located about 18 inches from the floor is the most suitable. The use of the low intensity light of the general lighting system in wards at night is not advised as it may disturb all the patients. These lights are provided with louvres, visors or other devices for regulating the amount of illumination delivered. This type of flush, recessed night lights should be placed in all patient corridors, private rooms and wards.

Emergency Lighting: Above all places, the hospital should be provided with a dependable and adequate emergency lighting system since there are many occasions when the very life of a patient may depend upon a procedure of technical precision requiring intense light. There are various systems in use, the most important of which are: (a) the engine-driven independent electric plant; (b) water turbine electric plant; (c) storage battery plants of the rectifier or motor generator type; and finally (d) portable independent flood light units containing separate batteries.

The engine-driven plants are only practical in large institutions, but have their disadvantages even there, since maintenance costs are high and a well-qualified electrical engineer is constantly required. Unless 15,000 watts or over are required for extended periods, this system is not advisable for hospital use. The water turbine system is adapted

to certain locations where the water is of adequate quantity and the demand for current is not too great; as a rule, however, this system is not practical for the average hospital.

Battery electric plants are most commonly used for emergency lighting protection and are by far the most dependable for instant light in all sizes, but when the capacity exceeds the requirement of 15,000 watts for two hour interruptions, the cost about reaches that of the engine-driven plant and a very considerable amount of space is required. Of the two types of battery electric plants, the rectifier system is the least expensive, the most compact, and the easier to install. Beyond a capacity of 6,000 watts for three hours, which is a rather high allowance for a good sized hospital, it is believed that the motor generator type of battery plant should be installed, thereby assuring more rapid recharging than is feasible with the rectifier type.

Emergency flood lights should be available in operating rooms, delivery rooms, and the receiving and emergency room. It is desirable to have one emergency light of low intensity in every corridor and stairway and the exit lights should all be equipped with an emergency bulb. These are the minimum requirements and the size and type of the plant should be based on the wattage demand for these lights over a period estimated to be the longest that the regular current may be out of service.

There are numerous other locations where emergency lights would be desirable, but when the load becomes greater than that required for the uses above mentioned, the cost of the plant amounts to a very considerable sum. Even when an emergency plant is available it is often desirable to have auxiliary portable lights with self-contained batteries which are always ready for use and can be used for any purpose. When there is no emergency plant such lights are imperatively needed and one should be available in the operating room, one in the delivery room, and another in the emergency admitting room.

Light Therapy: The therapeutic use of various types of lights will be mentioned very briefly since it is necessary to provide wiring and outlets for them. There has been a tendency to install in hospitals a luminaire combining general lighting with ultra violet radiation, but for various sound reasons this haphazard method of applying light therapy is undesirable and the apparatus has not been approved by the Council on Physical Therapy of the American Medical Association.

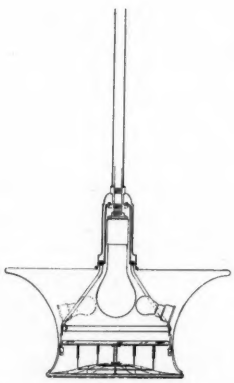
For the departments of pediatrics and orthopedics a special room should be designed, when possible, for the installation of a motor-driven, fan exhaust, dual carbon arc lamp of one, two, or four arcs, according to the size of the area and the amount of money available. This lamp is entirely enclosed with panels of ultra violet transmitting glass which confines the radiation from the arc to those rays found in natural sunlight.

The standard equipment is built for operation on 230 volt, 60 cycle, alternating current, but can be adapted to other voltages and frequencies when conditions require. Manual control of the individual arcs is by means of a 5 ampere toggle switch which opens and closes the contactors in the primary current. The line current amperes required are from 20.5 in the single arc to 82 in the four arc lamp. The input watts run from 5100 for the single arc to 12,400 for the four arc lamp. This equipment, including canopy, reflectors, exhaust fan and control cabinet, should be purchased as hospital equipment directly from the manufacturers and not included in the contract for lighting fixtures. Needless to say, a physical therapeutic agent of this potentiality should never be placed in a hospital unless there is a physician on the staff qualified to direct its use.

Summary

An attempt has been made to set forth the fundamental principles involved in the artificial lighting of hospitals, general considerations in ordinary lighting have been briefly outlined, and suggestions have been offered as to the type and degree of illumination suitable for the many special uses in hospitals.

Involving as it does the conservation of that most precious sense—sight—and concerned as it is with physical, physiological and geometric optics as well as other branches of the arts and sciences, artificial illumination is a subject which rightfully deserves more intelligent consideration in hospital practice than has been heretofore customary, and it is the object of this article to stimulate the interest of all



Cross Section of the Ferree and Rond Unit. Small Wattage Lights at Side

concerned to such a degree that hospital lighting may in the future contribute its full share toward the comfort, well-being and rapid recovery of those whose misfortune obliges them to use our hospitals. Good lighting is no longer a luxury and by the application of the knowledge and the use of materials readily available, it may be placed within the reach of all.

Radio Attack on Hospital Leads to Air Code

The Philadelphia Hospital Council reports a recent vicious unjustified attack upon one of the hospitals in the Philadelphia area by a news commentator for a radio station in Philadelphia. The Hospital Council and the County Medical Society jointly protested the attack and adopted a "code of principles," prepared by the Council, for all radio stations to follow in broadcasting news involving hospitals and the medical profession.

The principles were applauded by a legal representative of the station which had previously admitted that subsequent investigation proved the radioed facts to be entirely false. The code of radio principles follows in part:

"NOW BE IT RESOLVED, That the Hospital Council of Philadelphia promulgates the following principles of sound practice and procedure, which it invites the several broadcasting stations in this vicinity to subscribe to and observe, and which it directs its officers to recommend to the Federal Communications Commission for such action as said Commission may deem necessary and desirable in the public interest:

1. "That news broadcasts and comments by news commentators properly may be made without prior reference of the text thereof to the hospitals concerned in which statements are made that certain named individuals were taken to or admitted as patients by specified hospitals, but without any comments by the announcer or commentator with respect to the treatment or the character of service afforded by such hospitals to such patients and without any criticism by such news commentators or announcers with respect to the care and treatment afforded by such hospitals thereto.

2. "That each and every statement proposed to be made by a radio announcer or news commentator which in any way adversely reflects upon or criticizes the administration of any or all of such hospitals, or the policies pursued thereby with respect to the admission or non-admission of charity or other patients, or the service or treatment afforded by such hospitals to any of its or their patients, shall first be reduced to writing by such announcer or commentator in the exact form in which he proposes to broadcast the same and thereupon shall be submitted by him either to the President or to the Superintendent of each of the hospitals concerned for the Hospital's information. A reasonable opportunity shall be afforded such hospital officials to consult the records of the hospital and thereafter to call said announcer's or news commentator's attention, in writing or otherwise, to any errors or misconceptions of fact contained in said proposed announcement with respect to the matters under discussion or the policies which, in fact, are pursued by such hospital, and no broadcast or announcement shall be made until a reasonable opportunity has been afforded to such representative of the hospital so to do.

"The failure or neglect on the part of a hospital within forty-eight hours to advise such news commentator or announcer, or the radio station with which he is affiliated, of any misstatements of fact or other corrections which the hospital desires to have made in such proposed statement or announcement may be considered by the broadcasting station as evidence that the hospital assents to the broadcasting of the statement in the form submitted thereto.

"The Hospital Council deplores any and all attempts by news commentators or announcers to spice up their programs and to attract public attention by making sensational or inflammatory statements with respect to (1) the admission or non-admission of charity or other patients; or (2) the service or treatment afforded by the hospitals thereto, or (3) the policies pursued by the hospitals. Such statements are subversive of the public interest because they seriously damage the public relations of the hospitals, thereby tending to reduce the aggregate gifts and contributions made by the community for the support of these essential institutions, and because they minimize or present in a false light the importance and value of the service which the hospitals render in promoting the health and welfare of the community.

"AND BE IT FURTHER RESOLVED, That the Chairman of the Council be and hereby he is authorized and directed to appoint a Special Committee, composed of members of the Council, to contact the several broadcasting stations and to invite their acceptance of and cooperation with the program herein proposed, which cooperation the Council believes will be promptly forthcoming, in view of the donations of time on the air and money and other aid heretofore given by the radio stations to many hospitals. The Council hereby directs its officers and said Special Committee formally to call these resolutions to the attention of the Federal Communications Commission with a view to the establishment of rules and regulations, thereby governing such broadcasts in the future, and said Committee is empowered to take such steps as in its judgment are necessary or desirable to these ends."

First International Conference on Fever Therapy

The first international meeting on fever therapy will be held in New York City, September, 1936. The use of fever induced by physical and other agencies as a therapeutic procedure has received universal attention in the past few years. The conference will aim to collect and crystallize available data in this field. Therapeutic, physiological and pathological phases of fever will be discussed.

Further information concerning the conference may be obtained from the secretary, Dr. William Bierman, 471 Park Avenue, New York City, U. S. A.

Volunteers in Hospitals

RUTH COON

Superintendent, New Jersey Orthopaedic Hospital

Foreword

THE AMERICAN HOSPITAL ASSOCIATION is not only interested in developing volunteer service in hospitals, but is earnestly engaged in a study of the ways and means to promote the development of this service.

The American Association of Medical Social Workers has appointed a committee to study the use of volunteers in hospital social departments.

The following outline, prepared at the request of the sub-committee on volunteers in social work, is a compilation of material gathered during several years of quite intensive work with volunteer groups. If the statements seem very definite, it is because this experience has proved that certain things should or should not be done.

The Need for Volunteers in Hospitals

Most hospitals have need in many departments for people to do extra things to help the employed staff keep the organization running smoothly. Volunteers may help to fill this need, provided they are carefully selected, trained, supervised, and well organized.

The professional workers in charge should be thoroughly in sympathy with the project and request the service, before volunteers are placed in any organization.

How Volunteers May Serve

Volunteers should be given jobs which need to be done and which will keep them busy and interested. A list of jobs which have been well done by volunteers, follows:

1. Aids at information desk at entrance to hospital and also on the floors, to assist under supervision, in giving information and guiding callers.
2. Clinic secretaries to take notes (in longhand) for doctors.
3. Aids in handling ward visitors; giving out visiting cards, directing visitors, etc.
4. Clerical aids at the registration desk in outpatient department, taking necessary information from patients and routing patients to clinic.
5. Aids to have charge of library for patients, delivering books and magazines to patients.
6. Tutoring in children's ward where teacher is not available, or extra help is needed.
7. Assistants in central supply room, making dressings.
8. Messengers, taking messages, records, mail, flowers, etc., from one part of the hospital to another.
9. Aids in social service department. These will need special training and supervision, if they are to do case work. They may also assist with errands and other work.
10. Publicity aids, who write feature stories for the newspapers, and assist with other publicity.

Many of these may not be very thrilling, but if the volunteers are made to see how routine jobs fit into the whole picture and how useful they really are, they will be interested in doing them well. This may be explained at the initial interview and also in the training course.

The Responsibility for Volunteer Service

Responsibility for the undertaking should be delegated to one person from the staff of the hospital. There must be someone within the hospital organization who knows all the internal complications, to whom the volunteer chairman may go for help and who will assist in plans and in supervision. This person should also prepare the hospital staff for their supervision of volunteers.

A volunteer chairman may be directly in charge of the volunteers. She should be a good executive and not afraid of losing popularity by being a strict disciplinarian. She should be in close contact with the staff person in charge of volunteers. Under this chairman should be as many sub-chairmen or service heads as may be necessary. As the work increases, the organization will undoubtedly expand to serve the needs. The chairman should be on the hospital board representing the volunteers, if this is possible.

How a Volunteer Service May Be Started

A volunteer service may be started as an adjunct to some auxiliary or club, but if it is to grow in numbers and value to the hospital, it should not be hampered by too close identification with the parent club.

Recruiting of volunteers by word of mouth from volunteers to their friends, is the most satisfactory way of securing new volunteers. Just as a satisfied customer brings other customers to a shop, an enthusiastic volunteer brings her friends and acquaintances to do the same work. At the beginning

this may not be sufficient and women's clubs, churches, and other organizations may be informed of the need and the opportunity for service. It is probably wise to go slowly at first and not try to do too much work until fairly well established in the confidence of the institution.

The Training of Volunteers

Training in the form of a short course of talks is desirable for volunteers starting to work in a hospital, to give them an insight into the community relationships in which the hospital is a participant and into the complicated organization of the hospital itself. This knowledge makes them more intelligent interpreters of the hospital and its problems. From the experience of a number of hospitals it seems wise to include in the course, the following:

1. General information about the community and the place of the hospital and other social agencies in it.
2. Information about the organization and functions of the hospital.
3. Definite training for the special work assigned to the volunteer.

(See *Junior League Magazine,* May, 1932, "The Volunteer in Hospitals—A Training Course," by Ruth Coon and Transactions of the American Hospital Association — 1934 — Meeting about Volunteers.)

Placement may be done by the chairman or some other person to whom it is delegated. There should be a card catalogue of the volunteers with information about training, other experience, type of interests, amount of time to be given, etc., as well as where in the hospital the volunteer is placed. Each new volunteer should be interviewed in order to judge where her personality will best fit. Sometimes it is necessary to shift individuals from one service to another. The work to be done should always be considered first rather than the individual. The volunteers have to learn to put the job before personal feelings and ambitions, if the project is to be a success.

The professional staff in whose departments volunteers work has need for similar consideration. They must do their share in helping to train and supervise the volunteers in their departments, although each service should have a volunteer head through whom instructions and complaints should go.

Requirements and prohibitions inevitably have to be considered in any undertaking which concerns more than two or three people. Volunteers, individually and collectively, should have special consideration for such rules and regulations as their hospital suggests because they are in a position where they may do harm quite unintentionally. A good organization will try to foresee possible pitfalls and prevent them. Volunteers must not repeat outside, personal matters regarding patients or staff. They should conduct themselves in a dignified manner on duty and wear the regulation smock or uniform without an undue amount of jewelry or make-up. Volunteers should be careful not to take advantage of their hospital affiliation in their relations with the doctors. Hospital employees do not go to clinics unless sent by their department head and then only if they cannot afford to go to their own physician. Volunteers should not be given any special privileges of this nature. For most volunteers, warnings of this kind are unnecessary, but an organization has to prepare for every possible emergency. The service must be organized to protect the individual volunteer from the possibility of adverse criticism which would react to the detriment of the whole organization.

The Interpretation of the Hospital to the Community

Interpretation of the hospital to the community and vice versa is an important volunteer function. In many communities, hospitals are looked upon with awe and terror by a large number of people. Anything which will bring the hospital to a high place in the affections and esteem of the general public, is worth consideration. Having a large group of women from all social groups working in the hospital and knowing its problems and its triumphs is an aid to public relations. They develop a definite loyalty to the institution. Volunteers are in a unique position as interpreters between hospital and community.

If the hospital is a member of a community chest, the volunteers will gain a better understanding of the chest agencies and their inter-relationships and may in turn further interpret the hospital to the chest.

The volunteers themselves will gain a satisfaction and sense of accomplishment which will more than repay them for the time they spend.

Reading List
Re: Volunteers in Hospitals

"Send Me a Volunteer"—prepared by The Association of Volunteers, Welfare Council, N. Y. C.
General suggestions regarding use of volunteers.

"Volunteer Special Services"—General Manual, American Red Cross, Washington, D. C.
Pertaining to Red Cross, but some of it might be applied to other agencies.

"The Volunteer—Asset or Liability?"—by Evelyn K. Davis, reprint from "Public Health Nursing"—Nov., 1934.
Excellent material applicable to other agencies.

"Volunteer Values"—published by Family Welfare Association of America.

"Clinics, Hospitals and Health Centers"—by Michael M. Davis, published by Harper Bros.
Book regarding organization, etc., for professionals but of interest to volunteers for the general information.

"Social Work in Hospitals"—by Ida Cannon, published by Russell Sage Foundation.
Written for professional Social Workers but good for volunteers interested in social work.

"The Hospital Library"—Edited by Edith K. Jones, American Library Association, Chicago, Ill.
For information about library.

"How We Use Volunteers at Rochester General Hospital"—Modern Hospital, Jan., 1928, Vol. 30, No. 1.
One concrete instance of use of volunteers.

"How the Junior League Can Help to Popularize the Hospital"—by Dr. Charles H. Young, Modern Hospital, Aug., 1933.
Another example of the use of volunteers.

"What's the Matter with Volunteers"—Survey, April 15, 1932.
Another view.

"Miss Junior League Looks at Volunteers"—Survey, May 15, 1933.
From the standpoint of a volunteer.

"Value of Volunteer Organization in Promoting Occupational Therapy"—by E. C. Coster, Occupational Therapy, Vol. 10, pages 387-391, Dec., 1931.

Transactions of American Hospital Association Convention at Toronto, October, 1931, Round Table on Volunteers:

1. "Hospital Auxiliaries"—by Mrs. O. W. Rhynas, President, Women's Hospital Aids' Association of Ontario, Canada.
   How auxiliaries help with promotion, money, etc.
2. "Volunteer Service at Lakeside Hospital"—by Mrs. Henry L. Foote, Chairman, Volunteer Aids, University Hospitals, Cleveland, Ohio.
   How Lakeside Hospital uses volunteers.
3. Discussion of above papers.

Transactions of American Hospital Association Convention at Philadelphia, October, 1934, Meeting for Volunteers:

1. "What Volunteer Service Means to a Hospital Director"—by John E. Ransom, Johns Hopkins Hospital, Baltimore, Md.
2. "The Training of Volunteers for Hospital Work"—by Ruth Coon, Orange Memorial Hospital, Orange, N. J.
   Suggestion for training.
3. "Organization of Volunteers in Hospitals"—by Elizabeth Lowry, Rochester General Hospital, Rochester, N. Y.
   Showing need of organization if there are many volunteers and suggestions regarding their organization.
4. "Satisfactions and Dissatisfactions in Hospital Volunteer Work" — by Mrs. Wm. Gunn, The Junior League, Cleveland, Ohio.
5. Discussion of above papers.

Book of Photographs of Volunteer Work at Rochester General Hospital—American Association of Medical Social Workers. (Part of exhibit of Association—may be borrowed.)

THE LOS ANGELES COUNTY GENERAL HOSPITAL

The Los Angeles County General Hospital reports that in 1935 a total of 54,173 in-patients were admitted, and an average of 2542 visits were made daily to the out-patient clinics under the jurisdiction of the hospital.

During the year reported, the City experienced a severe epidemic of poliomyelitis, and on June 30, there were 164 members of the nursing staff still off duty afflicted with poliomyelitis.

The average cost per patient per diem of $4.079 during the year was maintained at practically the same level as the year previous. This despite the increasing commodity prices. The average cost of care per patient was $59.00, as compared with an average per patient cost of $85.00 in 1930, with the per diem cost of $5.303 per patient. This reduction in the per patient cost was due to the average short stay of patients in hospitals in 1935. A decrease in cost was not accomplished with any lessening of efficiency in the care and treatment of patients, as evidenced by the fact that the death rate is decreased in the same period from 9.7 per cent to 7.6 per cent in 1935.

Of the 54,173 patients admitted to the Los Angeles County General Hospital 4,175 were newborn infants.

The distribution of the patients admitted was as follows:

Medical service	21,974
Obstetrical service	10,810
Surgical service	19,261
More than one service	2,128

During the year 2,582 blood transfusions were given.

It is interesting to note that the hospital's own ambulances traveled 520,275 miles and transported 26,574 patients, with an average patient transportation of 19.58 miles and an average cost per patient of $2.28.

The institution had an estimated bed occupancy of seventy per cent for the year. The average number of days' residence per in-patient was 14.5; the daily average number of in-patients in the hospital was 2,491, and a total of 909,321 hospital days of care were given at a cost of $4.079 per day.

The nursing department employed 765 graduate nurses, there were 295 student nurses in the training school, and 597 attendants and orderlies were on duty constantly, making 1657 the total personnel of the nursing department.

The Psychiatric Social Worker in the General Hospital

ESTHER DIMCHEVSKY

Psychiatric Liaison Department—University of Colorado School of Medicine and Hospitals, Denver, Colorado

In September, 1934, the psychiatric liaison department at Colorado General Hospital threw its doors open for the first time. It is distinctly a clinic unit, and while it does entail finding out all about people, its investigations are not conducted in a busybody manner, but in a spirit of true social study and treatment.

If one of the functions of the psychiatric social worker is to assist the psychiatrist in his study of the "whole man"—would not skill and thoroughness in investigation of necessity be one of the main tools, though certainly not the busy-body type of interference of which Grace Marcus, one of America's outstanding social workers, speaks, when she says—"There are all sorts of social work—a busybody interference, grounded on good intentions, but not justified by them—this brand investigates people willy-nilly and tells them what they must and must not do. This type is a nuisance that is not prospering but is also not quite dead."

Why the Psychiatric Liaison Department?

Just what is the role of the social worker in the Psychiatric Liaison Department? First of all—why the psychiatric liaison department in the General Hospital? I am not considering the department here in its teaching and research aspects but merely as a clinic unit, dealing with individuals who originally come to the medical clinic, surgery, pediatrics, or one of the other clinics, thinking they are cases of digestive troubles, heart disorders, headaches, thyroid, constipation, etc., but who on thorough examination are found, in the majority of cases, to be entirely healthy as to cells and tissues or with such minor physical maladies that they cannot be held responsible for the pains and aches and discomforts of which they complained. They are the cases in which "the personality—emotional—mental disorder shows itself principally as body complaints and physiological disturbances." The patients are none the less ailing and in distress, but the physical symptoms which are apparently handicapping them are in reality a justification for maladjustments of one kind or another—inability to meet life situations, surmount difficulties, feelings of inadequacy brought on by discrepancy between the individual's capacities and life's responsibilities. A condition into which plays all that the individual has to react *with* —his physical, intellectual and emotional equipment. his habits and instincts,—as well as all that he has to react *to*—external, internal, environmental factors, disturbances of the inner mental life, etc. Thus mind and body cannot be split—the "whole man" has to be taken into consideration if diagnosis and treatment are to be truly adequate. So. "A gastric ulcer may really be a call for change of activity or behavior; the fast beating heart, faintness, upset in sleep or appetite, an attempt to handle emotional problems." Then neither pills nor powders nor yet the surgeon's knife can be effective, for anxiety, fear, depression, and the like are the initiating cause, the factors back of the physical difficulties.

A complaint of pain may be related to actual disease of some part of the body, or it may be merely an expression of a difficult life situation. The psychiatric liaison department deals with the latter as well as with cases in which there is some physical basis for the mental and emotional disorder, for physical illness may affect personalities in many ways—amongst others "create invalidism, develop unwholesome attitudes of compensation and seclusiveness, or foster paranoid trends." When these last are the predominant note, the responsibility for the patient lies with the psychiatric liaison department. During the past year, there were over six hundred such patients referred to the department. Five hundred fifty-seven of these were examined and treated by the psychiatrist. Four hundred ninety-two were adults and sixty-five children. Of the number, one hundred sixty-six were ward patients. Since it is a general hospital, physical complaint is the starting point, and because of this, rapport with patients is easier as in the lay mind there is no stigma to ill health and medical care, although a great number of people still feel it a disgrace to need treatment at a psychiatric hospital.

The Role of the Psychiatric Social Worker

Where, then, in this picture does the psychiatric social worker fit in and what is her role? Because of the very nature of psychiatric work—the understanding of human behavior,—the whole man in action,—the role of the social worker becomes

largely an interpretive one. I use the word here not only in its sense of explaining, but also as evaluating and educating.

When the patient comes to clinic or hospital, he is seen away from his habitual setting, unaccompanied by his environment. It is for the psychiatric social worker to help paint in that background with clear, accurate, telling strokes. To do this, she enters the home and brings back to the psychiatrist a picture of the family group in its own setting; she reports not only the attitudes and relationships in the immediate environment, but also those of the community from which the patient comes, thus helping the psychiatrist to see him as an expression of all his contacts and social relationships. At work or at play, within the walls of the home or without, no phase of the patient's life is too insignificant to be taken into consideration in the attempt to evaluate his maladjustment and correct it. The employer's testimony is sought for and frequently throws considerable light on the situation. In the case of a child, the school's point of view is often of special interest. All these the psychiatric social worker brings to the psychiatrist for use in his diagnosis. Let me illustrate: On a hospital bed lies Ruth—a small, 11 year old girl, quiet, friendly, interested in everything. She has been brought in because of constant complaints of pain in the side and spells, according to the chart "of unknown type." During these, she stares, stiffens and then begins to shake. The mother, who comes to visit Ruth, looks none too bright, but she is pleasant and neat. On examination, the internist says there are no physical findings to account for the ailment, and the psychiatric liaison department is called in.

While the psychiatrist is examining and studying the youngster herself, the social workers fares forth into the home and community. She finds a three room shack standing out like a sore finger in a neighborhood of tidy homes owned by stable working people. The home is crowded—six to nine people live in it, according to the number of relatives who feel entitled to share in the $58.00 pension. Broken windows are patched with cardboard; the yard is innocent of grass and is a lob-lolly of mud in rainy weather. Because of the low standard of living of this family, the neighbors have little to do with them, and there is no companionship. An aunt who lives nearby tells of much concern over health and discussion of illness since the father's death, due to tuberculosis. She also speaks of the mother's frequent complaints of pain in the side and spells "just like Ruth's," and says that the younger children, who seem much brighter than patient, stand in awe of her ill health. A neighbor unwittingly contributes to the picture the fact that although patient seems duller than the rest, she can get the best of them, for if the pain in the side does not get her what she wants, she resorts to a mournful "I wish I was dead like my daddy." If that avails nothing, she has a spell and comes out victorious.

The school reports that the girl's grades are low and that she does pretty much as she likes, but that the teacher is afraid to scold her since the child is not well. She is frequently excused from school, much to the envy of other pupils. She is neither a good student nor a good playmate, but is still quite the center of attention due to her ailments.

Seemingly, pain has been a very useful tool in the hands of this little girl who presents such a different picture with the background fully painted in. We have here a youngster who has learned early to meet the exigencies of environment with pain, to excuse inadequacies with physical complaints, to get satisfaction by ailing. (You might be interested to know that the patient was immediately discharged, and two months after the psychiatrist's recommendations were put into effect, patient's pains and aches disappeared entirely and have not returned.)

The Social Worker and the Psychiatrist

Once the significant social factors surrounding any case have been presented to the psychiatrist, the social worker stands by ready to step in again if her assistance is needed after the diagnosis has been arrived at and treatment recommended. Her interpretive role, however, is not at an end, only now it is a question of interpreting the patient and the psychiatric findings to the community, and that in such a manner that there shall be no social stigma attached, but rather a growing, constructive understanding of the patient's difficulties. During this process, the worker frequently stumbles upon various social problems in the home and maladjustments amongst the other members of the family. It is her responsibility to see that assistance is given and some sort of an adjustment effected. The psychiatric social worker must be the coordinating link between the clinic or department and the outside world, and in this capacity help secure the cooperation of family, school, employer, relief agency, or any other organization which may form a part of patient's environment. This should bring about a change in attitudes, not only towards the particular patient in question, but should make for a better understanding of any situation in which physical, intellectual, emotional or social factors are interacting to create a maladjustment beyond the capacity of an individual to surmount alone.

It is in this role, as interpreter to the community, that the psychiatric social worker finds her best educational opportunities—through one spe-

cific case to instill better understanding of human behavior as a whole. Occasionally, like all plans of mice and men, the educational efforts of the social worker go astray. I am reminded especially of a 13 year old boy I had several years ago —sullen, unhappy, failing in school, although very bright, constantly in trouble. A youngster from a broken home whose grandmother had little understanding of him. His one desire to join the Highland Band. After much conversation, a saxophone was bought. The musical instrument seemingly worked a miracle for the boy, and I should have been satisfied, but I discovered that the grandmother was urging saxophones on any parent in the neighborhood having trouble with a child. The boy's behavior problem had not served as training in underlying factors in behavior. However, much more frequently, the family, the school or agency do learn certain principles through the interpretation of one case and can apply them to advantage in others.

The Chief Objective of the Social Worker

It has been said that the chief objective of social work is "to assist individuals needing it, to achieve as complete a measure of self maintenance as possible" and that "self maintenance is the product of a reasonably adequate human equipment adjusting itself to a reasonably favorable environment." While the psychiatrist deals with the human equipment, he turns to the social worker for assistance in assuring as reasonably favorable an environment as possible. Again let me illustrate. A 14 year old Mexican boy comes to the clinic with headaches, dizziness, jerkings and twitchings which are especially noticeable in school. The psychiatrist's examination reveals that these physical symptoms are a reaction to strain, an expression of anxiety, and that this is largely a social problem—a question of easing up the environment for the patient.

The first step is the removal of a 12 year old girl from the home and placing her in an institution as she is a drooling idiot with ungovernable fits of temper during which she screams, jerks and twitches. Now the family breathes more easily and the mother, who has been bound to the house heretofore, is released for outside contacts and drawn into an Americanization class, as the children are beginning to resent her lack of English. The Relief agency's cooperation is secured for roomier quarters, as the family of seven has been crowded into two rooms and kitchen, two double beds for sleeping quarters. The school is contacted and as the boy is none too bright, he is placed in a special class where his studies are more in keeping with his intellectual ability and there is a chance at manual training. His social needs are met by organizing a scout group of boys of his type in the nearby community center. Twitchings and dizziness disappear—the discrepancies between his endowments and the demands of life upon them have been somewhat balanced, and he is better able now to adjust to them. You may say too much time and energy spent on a boy under par mentally, and yet, if nothing is done for him, he will either be the chronic invalid of tomorrow, demanding medical care and attention, at considerable cost, or the delinquent of the future, a burden on the State. Then to be considered are our future citizens, the normally bright brothers and sisters.

There is also the hospital patient, a twenty-one year old cripple, whose personality disorder, tension and brooding, are a reaction to her deformity and a facing of a life of dependence. Here the assistance of County Judge, County Commissioners and Shriners is enlisted, and through that enlistment an educational process in better understanding of human behavior is established. While the county looks after room and board at the Y. W. C. A., where the patient can have some recreation, the Vocational Rehabilitation Bureau takes care of her schooling at Opportunity School, where special interest has been enlisted in behalf of the girl. In another month she will be ready to step into a multigraphing or mimeographing position and not only be self maintaining financially, but maintain her mental and emotional poise. Now there is something for which to live.

What the Psychiatric Social Worker Should Know

Case after case can be cited showing how necessary it is for the psychiatric social worker to be familiar with community resources. She must know how to utilize them, use judgment in choosing the most suitable ones for each particular patient and use skill in interpretation. Her job calls for an understanding of certain legal matters (immigration, compensation, pension, Juvenile Court procedure, etc.), adequate working knowledge of the social implications of disease and, above all, a quick, sympathetic understanding of human behavior. And all this goes into "the finding out all about one."

"If it is possible to find some means of rendering men in general wiser and more useful than they have been hitherto, I believe that it is to medicine that we must look." —DESCARTES.

Business Administration of the Hospital

DONALD C. SMELZER, M.D.

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IT IS TO BE ASSUMED that the hospital is being operated on a strictly business basis, and that there is being kept a complete record of performance, in permanent form, of all financial, professional and vital statistics; these being kept in such a way that they may be used as a basis of analysis of past performance, and also as a basis for predicting the future in the operation of the hospital. Sound business practices are absolutely essential to promote efficiency and economy.

Hospital Income

The income of a hospital comes as a rule from two sources:

1. The Gross Earnings as the result of services rendered to patients.

2. Non-Operative Income, which may come from various sources, independent of actual hospital service.

Gross Earnings—This is income received from—

(a) Charges made to patients admitted to the hospital for room and board.

(b) Charges made to patients admitted to the hospital, or to the outpatient department, or private ambulatory cases for such special diagnosis services as X-ray, radium, laboratory, physiotherapy, electrocardiography, etc.

(c) Charges made to patients attending the hospital outpatient department.

Non-Operating Income—This constitutes money received from any source other than for services to patients, and is classified as to source, e.g.:

(a) Income from endowments.
(b) Contributions.
(c) Aid from welfare or community chests.
(d) Aid from the government.
(e) Miscellaneous non-hospital activities, such as barber shop, hospital gift shop, cooperative store, etc.

Exceptions to the above classifications may be made when the government pays the hospital for actual unit of service rendered to indigent cases. In this instance, such a receipt would be included under gross earnings of the hospital.

Rate Fixing

In order to insure that proper charges are made to patients for services rendered, there should be definite rates established for all of the services that the hospital has to sell. Definite prices should be allotted to the various classes of private rooms, beds in semi-private accommodations, and beds in wards, viz: the *rate per day* for accommodations occupied. In the majority of hospitals, the patient day is from midnight to midnight, and a daily census sheet is prepared on this basis. This sheet must include the name of each patient and the room number. A copy of this is sent to the business office, and the bookkeeper determines the proper charge and enters it on the patient's account.

Rates should be established for the services rendered by all of the special departments, viz: X-ray, laboratory, physiotherapy, electrocardiography, special articles of diet, guest meals, drugs, etc., and each department should report the services performed on all patients to the business office, on a form supplied for this purpose. This form is the authority for the bookkeeper to compute the charges from the established rate sheets and post the amount to the patient's account.

Allowances to be made by one person.

Control of Income

All monies should be paid into the business office, and not to individuals in departments, etc. A receipt should be issued for all cash received. The receipt should indicate the department to be credited. If the hospital is large enough, there should be a cashier. However, the bookkeeper should not handle the cash. No matter how small the hospital, a complete record by means of journal, cashbook, and ledger should be made.

Control of Expenditures

All money should be paid out on the authority of the cashier. Money may be paid out in cash, or by check from a bank account. A receipt should be obtained for all money paid out. Each payment, whether for merchandise, payroll or petty cash payments, should have a voucher memorandum, which must carry the full details of the transaction.

Every business transaction in the hospital should be evidenced by a written record. Every hospital administrator should be held responsible for seeing that this is carried out.

The Budget

"A budget system is nothing more or less than an orderly procedure which requires a constant application of the best known principles of business conduct in the financial affairs of an activity with the accompanying requisite of a continuous endeavor to keep these activities alive in the acts of the individuals charged with the operation of the system."

The above is an excerpt from the report of the Director of the Budget of the United States Government made to Congress at the end of the first period of operation of the budget.

Someone said "A budget is an educated guess."

Office Organization

The business office or administrative office is a major department of any hospital. The way it is conducted and the method by which it functions is a good index to the efficiency of the organization as a whole. As a major department of the hospital, the business office should have a person in charge with full authority, and responsible only to the administrator. The space allotted to the business office should be accessible with ease to the public, and should be quiet and dignified. The office manager should have a private office or be partitioned off from the rest of the personnel. This permits privacy for the interviewing of personnel, debtors, etc.

Irrespective of the size of the institution, the duties of the business office are the same. The number of personnel necessary to conduct the business office will, of course, depend upon its size. However, a definite routine is necessary and after an analysis of all the duties is made, the work is apportioned out to the necessary number of individuals, as duties to be performed. The routine duties of the business office are:

1. Keeping of the patients' register.
2. Cashier.
3. Bookkeeping of patients' accounts.
4. Preparation of the payroll.
5. Compiling of statistics.
    (a) Number and classes of patient days.
    (b) Deaths.
    (c) Discharges.
    (d) Meal costs.
    (e) Religious affiliation of patients.
    (f) Nationality of patients.
6. Preparation of state reports.
7. Preparation of comparative statements
    (a) Income.
    (b) Expense.
8. Issuance of purchasing requisitions.
9. Mail distribution.
10. Collection of patients' accounts.

All employees handling cash should be bonded.

In some hospitals, each duty may be large enough to occupy the time of one or more persons, while in smaller hospitals the volume of each is small and several may be combined as the duty of one person.

It is the duty of the office manager to see that each office employee knows what his or her duties are and to see that they are accurately carried out.

In many hospitals, the clerical work necessary for the admission and discharge of patients, as well as the operation of the record room, are under the general supervision of the office manager, as departments of the business office.

In many hospitals, the administrator does the purchasing; the orders going out from the business office. In large hospitals, there is a separate department of the business office for the purchase of supplies, and headed by a purchasing agent. In some hospitals, this is a large enough unit to be a separate and distinct department, allied to the storeroom; the head of such a department being responsible only to the administrator. Irrespective of the system, the records must go through the business office.

Statistics

Today, every hospital, large and small, must compile adequate and accurate statistics promptly, to be efficient. Each department should accurately record daily the data required, so that it may be used as a basis for apportioning expense and the computing of reliable unit costs.

Administrative Reports

Statistics are useless and a waste of time and effort unless the administrator makes use of them. They are useless unless they are up-to-date. Put to proper use by the administrator, they are the means of his following the service of every hospital department.

Properly filed and always available they are indispensable for comparative analysis, and budget control.

Standardized forms for daily, weekly and monthly statistical reports should be adopted.

The Hiring of Employees

In large institutions, there is a personnel officer whose duty it is to hire all employees. He functions at the request of departmental heads and procures the necessary personnel when needed. He is responsible for investigating references, etc., and makes the terms of employment. However, in the majority of institutions, the department heads themselves hire and fire personnel as part of their departmental responsibility. They report all the facts to the business office for payroll purposes.

Medical Examination of Employees

All new employees should be given a physical examination. This is carried out by a few hospitals, and many have persons handling food examined periodically. In many states, this latter is a state law, which is unfortunately carried out in a slip-shod manner.

Card Index of Employees

Every job should have a name and a number for budget purposes. These should be cross-indexed to the card of the individual on the job. This card should contain terms of employment in detail. When an employee resigns or is discharged, the reason is entered on the card; the card being refiled alphabetically in a separate place for future reference.

The Efficiency of Management of the Business Office

The hospital should keep abreast of the times in methods of bookkeeping and office routine. Old-fashioned bookkeeping methods have been supplanted by card index devices, looseleaf ledgers and modern copying devices. No one ever sees the old moist handpress for copying records any more.

Accounting machines have proven their efficiency for keeping daily postings of patients' accounts in many hospitals, and the manufacturers of these machines will design one to meet almost any need and condition. In large hospitals, these machines have made possible reduction in personnel, and have speeded up this particular phase of office activity. They are expensive, and in spite of their desirability, a luxury to the business office of a small hospital.

Every hospital, large and small, should have one or more modern adding machines. An adding machine tape is accepted by all auditors.

Other office machines to be considered for efficiency and economy are:

Mimeograph machine.
Envelope sealer.
Addressograph machine.
Stamp machine.
Noiseless typewriters.
Comptometer (for large hospitals).
Check protector.

Filing Systems

Modern filing systems and indexing systems have been devised to meet every business need. The card index for patients' names and personnel are almost indispensable in larger hospitals, and add to the efficiency of the business office.

Elaborate filing systems have been devised for correspondence, purchase requisition copy, receipts, etc., and each hospital considering these modern systems should consult the manufacturer, and have a survey made of their needs before investing in "stock devices." Many of these are still luxuries.

Telephone Systems

In the majority of hospitals, the telephone system is under the supervision of the office manager. In many hospitals, the telephone switchboard is actually in the business office. This is something to be avoided if at all possible. The switchboard should be in a room by itself, where the operator or operators cannot be disturbed. We realize that this is impossible in some of the smaller hospitals, where the operator has other duties to perform, and especially for night calls.

One must remember, however, that the telephone system is the "nervous system" of the institution. There are probably more contacts through the telephone system than through all the rest of the hospital combined. It should be sufficiently staffed to render efficient, courteous and kindly response to all concerned.

In large hospitals, an intramural dial system saves the operators from much detail, and actually saves money.

Many of us can learn a lot if we analyze our telephone service.

Hospital Paging Systems

There are many of these devices on the market—from gongs, buzzers, illuminated numbers, flashing numbers, to amplifying loud speakers. Each hospital will have to determine the best one to install to meet its needs, taking into consideration that type which will be least annoying to patients.

Paging systems are usually operated by the telephone operator, and personnel should be instructed to answer their calls promptly.

Staff In and Out Board

An adequate electrical system should be installed whereby the attending staff can register in and out. This should register in the telephone operators' room. Properly and faithfully used by the staff, such a device speeds communication and saves much of the operators' time.

Many hospitals still maintain a signed register of staff attendance as a permanent record.

Information Service

The giving out of information is a big problem to all hospitals. Large hospitals have an information center which dispenses information regarding patients to relatives, friends and press. This unit is kept posted as to the condition of all patients, and also arranges for interviews between residents and relatives.

In smaller hospitals, the information service is combined with the telephone service, the operators being supplied with the information regarding patients at regular intervals by the nursing department or chief resident's office.

Information should be given out with diplomacy, and personnel should be instructed to be pleasant and to realize that information regarding patients is confidential.

The handling of emergency notification to relatives requires poise and tact.

Persons charged with giving out information should be kept constantly posted regarding the condition of all patients, immediately on admission, and throughout the duration of their stay. An alphabetical list of every patient is essential. Visible index is to be preferred.

Mail Distribution

In large institutions, the mail problem is a large one. Mail arrives for patients and personnel. The business office should have an alphabetical list of all patients, doctors, nurses, and personnel, classified as to departments. Resident personnel should be notified to instruct their correspondents as to their proper addresses. This will facilitate sorting and distribution of mail.

Patients should be requested to leave their forwarding addresses on discharge.

Great care should be exercised by office personnel in the handling of registered mail, and a receipt should be obtained when such is delivered to the individual concerned.

Patients' Valuables

It is the duty of the business office to care for the valuables and money of patients admitted to the hospital. Every patient should be informed that the hospital cannot be held responsible for valuables or money unless deposited with the business office. Safety deposit boxes are the most satisfactory. The old sealed envelope system is still in vogue in many hospitals. Receipts should not be issued for specified amounts or items unless the clerk actually sees them. If the valuables are in a sealed envelope, a signature or seal should be affixed over the flap.

The valuables of an unconscious patient should be itemized and witnessed before being sent to the business office.

The Use of Staple Commodities in Hospitals

A survey of thirty hospitals, varying in bed capacities from 75 to 1,000 beds, widely distributed geographically, and including all classes of general hospitals, fraternal, municipal, denominational, and private institutions reported a total bed capacity of 9,986, with a total average of patients for 1935 of 6,937. It was interesting to study the survey and the figures assembled from the individual reports of these institutions, and to note the purchase and use of the following staple supplies:

Anesthetic Ether

The equivalent of 113,065 one-quarter pound tins of anesthetic ether was reported purchased in 1935; an average use per bed capacity of 11.5 one-quarter pound tins per year, and based upon the occupancy of 16.1 one-quarter pound tins. Eighteen of the thirty hospitals reported that they purchased their ether in one-quarter pound tins; four of the hospitals reported that they purchased their ether in one-half or one-quarter pound tins; five reported that they purchased it in one-half pound tins; one hospital reported purchasing it in one-pound tins, and five reported purchasing theirs in five-pound tins. The last five hospitals transferred their ether from the five-pound tins to suitable size containers for operating room use.

Bed Sheets

The report on the purchase and use of bed sheets in 1935 showed a total of 45,272, an average of 4.55 sheets per bed capacity, and an average of 6.3 per bed occupancy. It is interesting to note that the use of sheets is somewhat reduced from their use in the five or six years previous.

Absorbent Cotton

The amount of absorbent cotton purchased and used totaled 32,409 pounds in 1935, an average per bed capacity of 3.25 pounds per bed capacity, and an average of 4.7 pounds per bed occupancy.

Rubber Gloves

The rubber gloves hospitals purchased and used were 106,596 pairs, an average use of rubber gloves per bed capacity of 10.6 pairs, and 14 per bed occupancy.

Absorbent Gauze

The thirty reporting hospitals purchased during 1935 a total of 5,151,172 yards of gauze, an average consumption per bed capacity of 511 yards, and 743 yards per bed occupancy.

The smallest amount purchased by any one of the reporting hospitals during 1935 was 10,000 yards, and the largest purchase made by one hospital during the year was 1,200,000 yards. One hospital out of the thirty used cut sponges and gauze dressing prepared in standard sizes by the manufacturers.

The Duke Endowment's Ten Years' Performance in Hospitalization

DR. W. S. RANKIN, director of the Hospital Section of The Duke Endowment, in his report covers in retrospect ten years' performance of The Duke Endowment in hospitalization in the Carolinas.

Mr. Duke, in his Indenture in establishing The Duke Endowment, among other recommendations, made the following recommendation for the guidance of the trustees:

"I have selected hospitals as another of the principal objects of this trust because I recognize that they have become indispensable institutions, not only by way of ministering to the comfort of the sick but in increasing the efficiency of mankind and prolonging human life. The advance in the science of medicine growing out of discoveries, such as in the field of bacteriology, chemistry, and physics, and growing out of inventions such as the X-ray apparatus, making hospital facilities essential for obtaining the best results in the practice of medicine and surgery. So worthy do I deem the cause and so great do I deem the need that I very much hope that the people will see to it that adequate and convenient hospitals are assured in their respective communities, with especial reference to those who are unable to defray such expenses of their own."

During the ten-year period, The Duke Endowment has contributed $5,828,048 to 141 hospitals for free-bed-days; it directly assisted fifty-one per cent of the 908,099 in-patients treated in these institutions; it contributed thirty per cent of the cost of free service in these hospitals, and provided the equivalent of the total cost of free service for 480 patients daily since The Duke Endowment began to aid in this field. It paid, at the actual average cost of $39.40 per patient, the full cost of treatment of 147,880 patients during this ten-year period. It built and equipped 62 hospitals in the Carolinas at a total cost of $2,371,791.72.

Dr. Rankin in his report aptly states:

"The basic element in medical service is the professional element, more especially the physician. The strategic importance of the hospital in providing medical care (and especially is this true for the smaller communities, the rural communities) is not in the number of beds which it provides for patients nor the number of patients which it treats during the course of a year, but in its influence upon the number and the type of physicians that serve the community, the ten per cent of the seriously ill who require hospital care and the ninety per cent of the less seriously ill who are cared for in their own homes and in physicians' offices."

During the ten-year period the number of hospitals in the Carolinas has increased from 140 to 157, and the number of hospital beds from 6,184 to 8,575, an increase of 2,391 beds. The increase in the average bed capacity of the hospitals has been from 44.2 to 54.6 beds. Dr. Rankin reports that the average occupancy has increased from 50.5 to fifty-six per cent in these hospitals, and the number of patients treated per day from 3,120 to 4,761, an increase of 1,641 patients per day.

The municipal hospitals have increased during this ten-year period from 4 to 7; county hospitals from 4 to 7; religious hospitals from 16 to 17; while the non-profit community hospitals have increased from 23 to 81, more than eight times the combined increase of the other three types of non-profit hospitals. Of particular interest in the report is the statement that "the increases in provisions for the two races have been in about the same proportion, the beds for the white race having increased 1903, from 4698 to 6601, and the beds for negroes having increased 488, from 1486 to 1974. Here again it will be noted that of the total contributions, $7,958,359.05, the larger part, $5,828,047.95, went for the operation of hospitals and the smaller part, $2,130,311.10, for construction or the acquiring by purchase of additional hospital facilities."

Particularly significant in the hospitalization program is the fact that in addition to the 895,168 in-patients treated, 922,757 out-patients were cared for in the general hospitals assisted by the Endowment Fund during the ten-year period. The increase in in-patients from 49,460 in 1925 to 151,958 in 1934, over a threefold increase, is particularly indicative of the distribution of hospital care, which is provided for the people of the Carolinas through the Duke Endowment philanthropy. Of the 9,468,785 days of care rendered by the assistant hospitals, 4,822,360, or 50.9 per cent, were unpaid for by the patients receiving the care.

It is interesting to note Dr. Rankin's report on the average stay of patients on the ten-year period in the assisted hospitals. The average stay for all patients was 10.6 days; for full-pay patients 8 days; part-pay patients twelve days, and for free patients 13.9 days. Interesting again is Dr. Rankin's report

of the fatality rates of patients treated in the assisted hospital: For all patients, 58.8 per cent; medicine, 11 per cent; surgery, 3.53 per cent; obstetrics, 2.46 per cent; newborn (including stillborn), 13.33 per cent. In explanation of the high mortality rate for obstetrics and newborn, the report states that "many of the assisted hospitals received only those medical cases that have developed serious complications or are far advanced, and obstetrical cases with complications, eclampsia and mechanical difficulties requiring high and low forceps and Caesarian sections. The less serious medical and obstetrical cases found in the larger hospitals of the country form but a small proportion of such cases treated in small hospitals."

Contributions from The Duke Endowment to the Carolina hospitals constituted 33.6 per cent, one-third, of the contribution from all sources for the ten-year period. The average daily per capita cost over the period was as follows: All hospitals, $3.56; hospitals for white patients, $4.16; hospitals caring for both races, $3.57; hospitals for negroes, $1.90.

The performance of The Duke Endowment in the hospitalization of the sick of the Carolinas constitutes the finest demonstration of practical philanthropy, reaching a larger number of people whose need for it was greater than any other similar movement in history. The wisdom and vision of the fine old Southern gentleman who created this Endowment will provide in perpetuity for the care of hundreds of thousands of the indigent sick of his native state and South Carolina. It reaches into the homes of every city, village, and hamlet, and far back in among the mountain people of these two states. It has provided better hospitals in a better way, and immeasurably improved professional service in these institutions.

The wise policy instituted by the director of the Hospital Section, Dr. W. S. Rankin, in distributing the moral and material support of the Endowment to the hospitals and to the medical profession of the Carolinas, more than confirms the confidence that Mr. Duke reposed in him and his associates when he established this fine philanthropy.

The Commonwealth Fund and Rural Hospitals

In 1927 the Commonwealth Fund began a program for the establishment of rural hospitals under the able direction of Henry J. Southmayd, director of the Division of Rural Hospitals. Careful planning not only for the establishment and construction of these hospitals, but for their operation was diligently worked out. Architects and hospital consultants were brought together in designing the hospitals that would especially fit the needs of the rural communities. The Fund, in its annual report, states that from 1927 to 1930 six 50-bed general hospitals were built in average rural communities.

Six 50-bed general hospitals, built in average rural communities from 1927 to 1930, have expressed the Fund's conviction that the countryside would use and could support hospital service of a grade which would encourage doctors to enter country practice, stay in country practice, and do better work there. These hospitals were still new when the depression came. Each represented, to its own constituency, an unfamiliar situation. The public had begun, but just begun, to get used to them. Business men were groping toward a grasp of the administrative and financial problems of a hospital board. Physicians were moving somewhat hesitantly toward a recognition of their group responsibility.

The years of depression slowed down these growth processes. Fewer people could afford hospital care. Demands for free service multiplied. Physicians found themselves in sharper competition than ever before.

Now it is possible to say that the tide has turned. For two years the figures which measure utilization of the hospitals have been climbing, not so rapidly this year as last, but definitely. Average daily occupancy for the whole group, in the first nine months of 1935, was 23.3, only half a point behind the peak reached in the like period in 1931. As economic conditions improve, this index should rise. Though it is too soon to say how accurately the accommodations provided correspond with the requirements of a given community, the occasional appearance of forty to fifty patients at a time is suggestive of future demand.

Financially the hospitals are approaching stability. They have needed help during the depression with major repair and building expenses, but five of the six have now assumed the full cost of the essential permanent staff, including the resident physicians who were at first provided by the Fund. One (at Farmington, Maine), with a bequest of approximately $50,000, is on its way toward accumulating

an endowment fund. Others have met their current financial needs in various ways, but they are meeting them alone.

Administratively, after much trial and error, the hospitals are settling down. The dearth of persons combining the technical ability and leadership quality essential in a superintendent is still a most difficult problem. The adoption of a fixed rate plan at two hospitals has pleased patients and seems likely to improve collection experience. Under this plan the patient knows when he is admitted how much his total bill, including the necessary "extras," will amount to, and may secure a discount for payment in advance.

Professionally, the work done in the hospitals tends to improve. The number of physicians referring patients for care tends to increase in most of the communities, while treatment within the hospital tends to be concentrated in the hands of fewer men. In so far as this represents a tacit recognition by the medical group of the superior qualifications of certain of its members, this would appear to be a desirable trend. At one hospital recently a thoughtful staff member remarked that the volume and variety of clinical experience to be gained from giving free care to "service" in-patients and to out-patients stimulated professional growth.

At first surgical cases were heavily preponderant in all the hospitals; five of the six are now admitting approximately two patients out of every five for medical or obstetrical as distinguished from surgical care. More babies are born in these hospitals every year; in 1935 (to September 30), sixty-nine per cent of the deliveries were normal, indicating that the hospitals are used by choice and not merely in emergency.

A seventh hospital was formally opened at Kingsport, Tennessee, on August 9. The building, planned and constructed five years after the last preceding unit, marks a definite improvement in physical details. The experience of the Fund with other medical groups was used to good advantage in preliminary negotiations, so that when work began both physicians and laymen had a better understanding of hospital standards and services than was the case in earlier projects.

At Kingsport, for the first time in the Fund's experience, a pre-payment plan of meeting the cost of hospital care has been set up by the hospital board. Employed persons enrolling by groups, upon payment of a fee of $1.00 and an annual charge of $9.00, become entitled to twenty-one days of free hospital care and certain discounts on additional hospital service. A supplementary payment of $3.00 per year enables such members to secure substantial discounts for services rendered to members of their families, and individual applicants may also subscribe to the plan upon payment of $14.00 the first year and $12.00 per year thereafter. The scheme is experimental and details will undoubtedly have to be adjusted in the light of experience.

The eighth award in the series was recently made to Tupelo, Mississippi. This is a trading center for a large area in the northeastern part of the state; the district from which the hospital will presumably draw patients includes practically all of three counties and parts of four more, with a gross population of more than 100,000. This district is now served chiefly by a small hospital in Tupelo, poorly housed in an unsuitable building, which will be closed when the new hospital is ready. To secure the award 2790 different contributors pledged a local quota of $40,000. Leading laymen and physicians alike appear to understand thoroughly the advantages which the hospital will offer and the responsibilities which it entails, and the physicians, generally speaking, are qualified to do a good grade of work. Applications for a further award are now being considered.

Hospital Library Quarterly Book-List

A hospital library book-list, quarterly, mimeographed, twenty-five cents per year, is being undertaken by the Hospital Libraries Committee of the American Hospital Association as an experiment to see how great is the demand for such additional service.

This mimeographed list is not planned as a competitor of the semi-annual lists in the Book-list, published by the American Library Association, though it may supplement them, but is being prepared particularly for that great majority of individuals doing hospital library work who do not see the Book-list or Hospital Management, which carries a reprint of the Book-list recommendations.

The first number of the Quarterly Book-List is due to appear January 1st, 1936, and will be sent as a sample copy, gratis, upon application to—

Perrie Jones, *Chairman*
Room 220
State Office Building
St. Paul, Minnesota

E. C. Pohlman Honored

The Iowa Hospital Association held an informal testimonial luncheon for Mr. E. C. Pohlman, who is leaving Iowa to take over the superintendency of the Decatur and Macon County Hospital, Decatur, Illinois. Mr. Pohlman has served as secretary of this Association for three years and as treasurer since April, 1935. Rev. J. P. Van Horn, superintendent of St. Luke's Hospital, Cedar Rapids, was elected treasurer of the Association.

Adequate Staff in Quality and Quantity for the Tuberculosis Sanatorium

GEORGE THOMAS PALMER, M.D.
Springfield, Illinois

MY OWN EXPERIENCE in sanatorium work has been confined to an institution of less than 100 beds, consequently my remarks on larger institutions must be largely theoretical. I would say, however, that, on invitation of the Federal Government and the National Tuberculosis Association, I made tours of inspection on two occasions to the government sanatoria in seven of the Western and Southwestern States. In these inspections special attention was given to the medical personnel and its success or failure in operation.

Minimum Standards for Medical Service

The minimum standards for medical service in sanatoria have been quite definitely outlined by the American Sanatorium Association and are familiar to us all. We must bear in mind, however, that these are *minimum standards*—the lowest limits of institutional respectability, below which we cannot go and make any claim to sanatorium efficiency. It is my wish to present for consideration adequate or desirable standards for good sanatoria and not only quantity but quality of medical service.

The Sanatorium Association specifies that the medical director shall be a "reputable, licensed physician"—that is all. "Part time service is acceptable if the director spends two hours a day at the institution." There shall be one resident physician for every 60 patients. Certainly these are the very limits of minimum. The element of quality is ignored.

To be merely reputable and licensed may be sufficient qualifications for membership in an undiscriminating county medical society, but not for the director of a sanatorium. What the man is capable of doing is more important than the number of hours he devotes in trying to do it, and two hours are very few. One physician of the right quality can handle 100 patients better than two men of the wrong quality can handle 60.

Unfortunately, the supply of physicians available for sanatorium service is made up, to a considerable extent, of men so young that they have had limited experience and so young as to fail to impress the average patient, or older men who for some reason—often *not* lack of ability—have failed to succeed in general practice or other more popular lines of medical work. Of these, the youngsters are usually preferable. Out of these have been developed many valuable sanatorium physicians; but this is often through a painful process of elimination.

Division of Work Among the Staff

The work of the sanatorium staff may be roughly divided into four divisions:

First: Diagnostic, including physical examination, X-ray and laboratory work;

Second: Treatment, including medical and general treatment and chest surgery and collapse therapy;

Third: Business Management;

Fourth (and quite as important as any): What we may call patient management, consisting of education, discipline, emotional adjustment, and the development of a new philosophy of life.

The Medical Director

The medical head of a sanatorium, in my opinion, should devote his personal attention to that part of institutional operation that he is least able to supply from the open market. Laboratory, X-ray and other technical workers are readily available and the quality of their work may be quite definitely determined. Competent surgical service for collapse therapy is easily employed, as are other technical features of treatment. Business management, like all other departments, should be supervised by the medical director, but its details should be placed in other and usually more competent hands.

What we may term "patient management" is more intangible, requiring a degree of personality and understanding not so essential in the other divisions of institutional work, and these qualities are rarely purchasable on the open market.

So far as is humanly possible, the medical head of the institution should be personally acquainted with every patient and he should be readily accessible to these patients for all legitimate purposes and at all reasonable times. Obstacles placed in the way of the patient in his access to the head of the institution constitute one of the frequent justifiable

complaints on the part of patients and their families in many institutions. For the medical director to permit himself to become absorbed in medical technicalities or business details and to delegate the guidance and direction of the sick to a subordinate, strikes me as a serious mistake.

In my own sanatorium, which, I grant, is a small one, the printed rules state that the medical director is available to the patient at any time for the discussion of his illness or his personal problems, and that any nurse or other employe who places obstacles in the way of the patient will be severely disciplined. I am frankly suspicious of any assistant or employe who would prevent ready access to me, and I am inclined to feel that the patient shares that suspicion.

The Importance of Staff Meetings

The importance of regular and frequent staff meetings cannot be over-emphasized. In the smaller instiution, weekly staff meetings should be held and time should be taken to consider the record of each patient in the sanatorium. In the larger institutions the weekly consideration of each case by the staff is obviously impracticable; but if so, some satisfactory substitute should be provided.

In some of the larger sanatoria it is the custom to place a ward or a section of 50 or more patients under the control and direction of a doctor who is the physician and the *pater familias* of the group. This may prove satisfactory if the doctor in charge is one of proven ability and dependability. In utilizing the services of new and untried physicians, however, this may prove very unsatisfactory unless there is closer supervision than I found in any of the government sanatoria. With a cut and dried custodial job the average doctor is inclined to sacrifice rigid discipline for the sake of peace and popularity, and his medical work is likely to suffer from lack of competition with other medical men.

In one of the large government sanatoria, operated on this plan, I found the section with the best discipline, the best morale and, so far as I could see, the best curative results, under the charge of a man whose medical and technical qualifications I could not commend to the Surgeon General. He was a man of personality and a natural leader of men, but he was a very poor doctor. What his section needed was medical ability and it needed it as badly as several of the other sections needed personality and an understanding of the sick human being.

It has occurred to me that in the large sanatoria it would be better to combine two or more of these sections, and to utilize the services of two or more doctors who would be able to alternate rounds and observation of patients and who would give to each other the desirable stimulation of competition. They could hold sectional staff meetings, going over the record of every patient and deciding each step in treatment by consultation. Out of these sectional staff meetings would come those cases which require more serious consideration and which could be referred to the weekly general staff.

Briefly, the medical staff of a sanatorium should be large enough so that every patient—bedfast and ambulant—will be seen by a responsible physician every day with adequate time for explanation and conversation. Naturally there should be personnel and equipment on the grounds for every feature of diagnosis and treatment. The removal of the patient for special treatment or diagnostic procedure should rarely be necessary.

The Selection of the Medical Personnel

Employed with the element of quality in view, preferring men of personality and cultural background, as well as medical qualifications, I should suggest the following as an adequate staff:

(1) *Medical Director.* Full-time in any sanatorium of 50 beds or over. Selected for his grasp of all phases of tuberculosis work; but also for his personality, executive ability, and his knowledge of the psychology of the sick man or woman. He need not be expert in technical details.

(2) *Assistant Director.* Full-time in all sanatoria of 100 beds or over. Capable of assuming charge in the absence of the director. Should be well grounded in general internal medicine; able to supervise and coordinate all medical activities and to assist attending and consulting staff.

(3) *Resident Physicians.* One for every 50 patients. In view of conflicting opinions and methods in sanatoria, it is better to take high grade young physicians rather than those who may have been mis-trained in other sanatoria.

(4) *Technician.* Full-time in all sanatoria of 100 beds or over, preferably a physician, to have charge of X-ray and laboratory work. It is better to have one high-class person with lay assistants rather than two of mediocre ability.

(5) *Nose and Throat Man.* Full-time in the large institutions and attending once each week in the smaller.

(6) *Attending Surgeon.* Present at frequent intervals for consultation, as well as to do major forms of collapse and general surgery. Even for the largest sanatoria, better talent for major work can usually be secured from outside.

(7) *Attending Internist.* To meet the non-tuberculous conditions so often overlooked in sanatoria—heart, thyroid, diabetes, digestive disorders, etc.

(8) *Attending Orthopedist.* To be employed as needed.

(9) *Attending Obstetrician and Gynecologist.* To help meet the grave problems of tuberculosis and pregnancy and to handle gynecologic conditions. Interruption and delivery in tuberculosis requires special knowledge of tuberculosis.

(10) *Attending Dentist.* Who should be present regularly and frequently to meet mental deterioration of the tuberculous and to avoid long and exhausting treatment of the individual.

(11) Provisions for heliotherapy, occupational therapy, lectures and personal instructions under the actual direction of the medical staff.

Rehabilitation of Patients in the Sanatorium

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MANY OF THE AUTHORITIES dealing with the care of the tuberculous have been greatly concerned with two closely associated problems, i.e., the prevention of relapse of former Sanatorium patients and secondly, the restoration of tuberculous individuals to working capacity.

The Incidences of Relapses in Discharged Patients

A review of the literature as published in the *Transactions of the National Tuberculosis Association,* discloses numerous expressions by our leading authorities on these subjects. At the Minneapolis meeting of the National Association in June, 1925, Hochhauser[1] stated "we are still impressed with the large percentage of relapses among Sanatorium graduates. Two studies made about ten years ago showed approximately fifty per cent of the patients who made a gain while at the Sanatorium, within six months to two years after their discharge, were found to be dead or in worse condition than when they left the Sanatorium."

In 1918, at the annual meeting of the same organization, the same author[2] stated "the real test of the effectiveness of curative work for the tuberculous is: how large a percentage of Sanatorium patients stay well? Are patients finally returned as independent members of their communities or as chronic dependents?"

In 1920, Pottenger[3] said, "The large percentage of relapses among those who have secured an apparently satisfactory result is another disappointment to clinicians as well as to patients." In 1922, Antonowsky[4] quoted Taylor, of Halifax, England, "that of 1914 cases, five years after discharge, 76.5 per cent were dead and of the remaining 23.5 per cent, that were living, only half were able to work."

The Unfortunate After-Results—How We May Eliminate Them

These quotations indicate the necessity of serious consideration if the elimination or improvement of these unfortunate after-results are to be achieved.

We do believe that considerable progress has been made in recent years because of first, the increased use of collapse therapy aiding in more rapidly placing the pathology in the lung under control and resulting in more adequate arrest of the lesions and, second, because of the recent tendency to greatly prolong the time of Sanatorium treatment, especially that part of Sanatorium treatment consisting of strict bed rest.

Kinghorn[5] in 1919, stated "I have felt for many years that it has been a great mistake that the average duration of a patient's stay in a Sanatorium is three months or less. To a working man, a man who has to return to his work, it is simply a drop in the bucket. When we consider that in private practice the average duration is almost a year and a half to two years, and when we consider the wonderfully different results we get in private practice as against the Sanatorium work, I think the time has now come when we should concentrate and get the time prolonged from six to nine months or twelve months or longer."

Pottenger, in 1920,[6] stated "Probably the next most important factor which contributes to relapses is inadequate and insufficient treatment."

This statement from Pottenger is well emphasized by Hull[7] who shows that of 84 cases relapsing and readmitted for Sanatorium care, 69 had had less than twelve months' treatment and 57 of these had their relapses and were returned for further Sanatorium care in less than twelve months after their first Sanatorium experience.

I believe we have all been guilty of trying to do a permanent job in an entirely too short a time and secondly, we are much too slow in changing our conception of what constitutes an arrested case and when exercise is permissible.

It is the custom of this writer to place all entering patients at strict bed rest. Food is brought to

him; baths are given to him in the bed; he must use urinal and bed pan. While temperature and pulse may respond favorably in a few weeks or months and while a satisfactory gain of weight to normal or above may occur, he is, nevertheless, still confined as a strict bed patient until his X-ray films disclose a stabile lesion and his sedimentation blood test shows quiescence. It is our conviction that the fastest way to get well of tuberculosis is by strict bed rest for a prolonged period at the beginning of treatment. Afterward, when the lesion is under control, exercise may be pushed faster and further than when a short initial period has been spent in bed.

The Development of the Patient's Work-Program

Some five years ago we discussed with our patients this high percentage of relapses reported and offered them the opportunity of helping to solve the problem. We reserved all the ordinary Sanatorium positions, not filled by technically trained people, to be filled by patients when they demonstrated their ability to do useful work in small amounts, gradually increasing this work month after month. As a result, patients now ask for a bed to make, a tray to carry, a period of time on the telephone exchange, beds to push to the sun roof or to the operating room, bedside tables to clear and put in order, etc. This work is gradually increased month after month, under Sanatorium supervision with monthly blood sedimentation tests and quarterly X-ray films.

At the point where eight hours' work is being done, the patient is put on the payroll and receives a monthly check. It is surprising how satisfactorily this program has been adopted by the patients and it is equally surprising and gratifying to see the results obtained.

The average stay in the Sanatorium has, of course, been increased. For all cases discharged during 1934 who were under treatment 90 days or longer, the average residence was 611 days; but sixty-nine per cent of all those patients were discharged "arrested" or "apparently arrested" and fifty per cent of those had had positive sputum. Sixty-six and sixty-six hundredths per cent of those admitted as "far advanced" with positive sputum were discharged "arrested" or "apparently arrested."

In our classification, an "apparently arrested" case is capable of working four hours daily and an "arrested" case capable of working eight hours daily.

During the past five years, 90 patients have been discharged after from four to eight hours' work daily. One of these suffered from tuberculous peritonitis only and one from tuberculous pleurisy, without evidence of pulmonary involvement which could be demonstrated, leaving 88 pulmonary cases in this group.

26 were "minimal"cases—2 with positive sputum.

21 were "moderately advanced"—3 with positive sputum.

41 were "far advanced"—27 with positive sputum.

Surgery or collapse therapy was done on three "minimum" cases, i.e., pneumothorax followed by phrenic exeresis.

Among the "moderately advanced" cases, one had phrenic exeresis alone; two had pneumothorax alone; two had pneumothorax followed by phrenic exeresis and one had pneumothorax and pneumolysis.

Among the "far advanced" cases four had phrenic exeresis alone; six had pneumothorax alone; five had pneumothorax followed by phrenic exeresis; one had pneumothorax followed by thorcoplasty and one had thorcoplasty alone.

Among the 26 "minimal" cases, no relapses have occurred. One has been killed in a auto accident. He was well and working, had married and was discharged five years before his death as an "arrested" case.

Among the 21 "moderately advanced" cases, no relapse or deaths have occurred.

Among the 41 "far advanced" cases, one relapse occurred and he returned to the Sanatorium for treatment, had artificial pneumothorax and has again been discharged an "arrested" case, capable of working eight hours daily. One case died from heart failure three years after discharge. One case died as a result of an apical thorcoplasty done to close a cavity which had shown tendency to enlarge.

One case died from lobar pneumonia five years after discharge. She had a three stage thorcoplasty while under treatment. After discharge, she gave birth to two children and remained well five years or until she had lobar pneumonia.

One case relapsed and returned for treatment of his tuberculosis and complicating diabetes. He has since been discharged as "arrested" and is now working.

One case has just now relapsed after working two years; has developed a small, soft-walled cavity and a positive sputum.

The Results in Discharged Cases

So, we have four deaths among the 90 discharged cases, only one of whom could, in any way, be charged as having been a relapsed case, 1.11 per cent deaths; and we have two relapses readmitted and again discharged as "arrested," an additional 2.22 per cent, and one more relapse requiring further treatment at this time, an additional 1.11 per cent or a total of 4.44 per cent failure of

permanent results of which 1.11 per cent covers the deaths from the tuberculosis in the group of 90 patients.

CLASSIFICATION OF 90 PATIENTS DISCHARGED WORKING 4-8 HOURS

		A	B	C	Sputum plus
Minimal	26	11	14	1	2
Mod. Adv.	21	1	20	0	3
Far Adv.	41	1	30	10	27
	88	13	64	11	32
T.B. Peritonitis	1				
T.B. Pleurisy	1				
	90				

COLLAPSE THERAPY

	Minimal cases	Moderately advanced	Far advanced
Pneumothorax only	0	2	6
Pneumothorax plus phrenic	3	2	5
Pneumothorax plus pneumolysis	0	1	0
Pneumothorax plus thorcoplasty	0	0	1
Phrenic exeresis only	0	1	4
Thorcoplasty only	0	0	1
	3	6	17

We believe it is entirely logical to retain tuberculous patients in the Sanatorium until they have demonstrated arrestment of the disease under working conditions.

As long as human nature is what it is, the average patient, after he leaves the Sanatorium will tend to do more than he is capable of doing. Experience does teach us that the most important period of time in the treatment of a tuberculous individual is that during which he is gradually assuming more and more physical activities. It is a period of testing the degree of arrestment and errors in judgment must be quickly recognized and adjustments made without loss of time if damage is to be avoided.

The rather intimate knowledge gained in the treatment of the individual case during the arrest of the disease should place the individual in an unusually favorable position for following the case through to a permanent arrest with a capacity to work and remain well.

It will be thought that such a lengthening of Sanatorium residence will keep the capacity of the institution tied up for those who are inmates to the exclusion of new cases desiring admission but this has not resulted in our case. The absence of "repeaters" has taken care of that.

The Medical Director's Responsibility to the Patient

In any case, I like to ask the question as to my responsibility. Is it solely to prevent death occurring in the individual coming to the Sanatorium? Is it to restore health to the point where chronic invalidism maintains over future years, or is it to restore these patients to health and working capacity, if that be possible? If our responsibility is to restore working capacity where that is possible, then we must be prepared to revise our conceptions as to length of Sanatorium care first and as to degree of arrestment—second.

It will be thought, perhaps, that the employment of patients might add to the cost of maintaining the Sanatorium. We have not found it so. In fact, it appears to be the only way where the cost of rehabilitation of the individual can be absorbed by the community without increased expense. The prevention of relapse saves money in the long run and in our experience, enables an institution which at one time had quite a waiting list, to adequately serve the community without the expense of providing additional beds.

It is difficult to contend that just this or that factor is responsible for lowered death rates from tuberculosis, but the fact remains that during the past 10 years, deaths from tuberculosis have decreased 44.8 per cent in our community. It is to be hoped that future efforts will add to our knowledge and to our success in dealing with this most important problem.

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Hospitals Take Notice

A man, giving the name of Charles Casper, has been operating in Pittsburgh and Philadelphia during the past several weeks. Posing as a friend or relative of patients, he presents forged certified checks drawn for a larger amount than the bill and receives a substantial amount of cash in change. Three hospitals in Philadelphia have been victimized by this impostor to the extent of $50.00 each. He is evidently traveling throughout the country, and this notice is a warning to hospitals to be on the lookout for him.

The Role of a General Hospital in Post-Graduate Training for Interns

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THE ROLE of a general hospital in post graduate training for interns involves the following fundamental factors: (a) the medical staff; (b) educational qualifications and facilities; (c) the intern staff; (d) the hospital.

The Medical Staff

To solve the problem of selection of the medical staff, information regarding the skill of the men concerned is required. In this connection there is always the problem, which as yet remains unsolved, of making way for the more progressive young man whose interests must be developed and retained. It is impossible for staff doctors to maintain a sustained interest in a service that does not provide a stimulus and opportunity for scientific investigation. It has often been said that no institution is any greater than the staff which mans it, and the statement in itself is not debatable. Certainly there can be no greater attainment for an institution than to select men on its staff for positions as attendants and associates who are specialists in their particular field. None will dispute the statement that he who daily practices surgery is more likely to become a skilled diagnostician and a safe operator, than the physician who performs only a score of laparotomies annually. The well trained intern should be a better judge of cardiac functioning than he who daily removes tonsils or treats fractures.

The Visiting Staff of a hospital should have two fundamental duties: The actual treating of the sick and the teaching of the interns. They must recognize that if the hospital is to serve to the fullest extent, the teaching of the intern is one of its important functions. A great deal depends on the interest of staff members in the intern group. Interns wish greater liberty in caring for patients but if more substantial teaching were done by the Attending Staff, perhaps there would be less complaining by the interns. This would establish more regular routine ward rounds, give closer supervision to the patient's history, and would bring our hospitals up to a higher standard of efficiency.

The Intern Staff

An intern may be defined as a recent graduate in medicine who comes to reside in a hospital to serve his apprenticeship solely for the purpose of acquiring practical knowledge in the care of the sick.

The intern has had to submit to a preliminary education that is conducted under a definite schedule of the highest requirements. A College training is insisted upon before he may be accepted as a matriculate in an approved medical school; then follows a strenuous course of from four to five years in the fundamentals of scientific medicine.

The internship period which follows is from one to three years and has been treated by the intern merely as a service year. The hospital is furnishing what the young graduate needs most of all—an opportunity to apply his formal training to practical problems under the direct supervision of qualified physicians. It is to be hoped that in turn the intern will take advantage of it and assume the graduated responsibilities for the actual care and treatment of patients.

The hospital should concern itself with the educational advancement of the intern. Well arranged systematic instructions for the interns are lacking in most hospitals, even in hospitals which could set up a good program for the continued education of the intern, aside from the practical experience he receives. It should be the aim of those charged with the responsibility of preparing these interns for future practice to see to it that prior to the completion of their internship they are thoroughly grounded in the art of diagnosing. Important diagnosis and proper treatment are often missed by the family physician due to the lack of his proper training during the time of his internship at the hospital.

It would seem that the ideal method of training the intern would be to offer a definite schedule of instruction in their associated hospitals. The work should cover a period of at least two years and preferably much longer than that. Probably the ideal scheme of internship would be a rotating one including the fundamental subjects as pathology, medicine, surgery, obstetrics, pediatrics, eye, ear, nose and throat, etc., followed by more specialized instruction in X-ray, genito-urinary diseases, physiotherapy, electrocardiography, dermatology, cystoscopy, allergy, proctology, neurology, varicose veins, tumor, etc.

In setting up a scheme for an intern schedule, the motivation should be the rendering of the highest possible type of training, in an organized fashion and in the most practical way.

In the wards, the intern's service should be a rotating one and no attempt should be made to turn him out qualified either as an internist or surgeon, though he may assist at operations and do an ordinary uncomplicated surgical case. Bedside work and routine ward rounds with his chief and associates should be the high lights in the day's work. Here the chief concern should be differential diagnosis and treatment and the intern should be made to familiarize himself with the ophthalmoscope, auroscope, sinus-transilluminator and such other diagnostic apparatus and measures that are safe in the hands of the general practitioner, and with which he should be capable of recognizing at least the gross lesion.

In the laboratories he should not be regarded as an employee and burdened with time consuming repetitious work, better done by paid technicians, rather should he be expected to follow up the blood, urines, and pathologic specimens of the cases to which he is assigned.

A definite course of lectures on various subjects is highly important and definitely welcomed by the intern group. In our own particular hospital a series of Wednesday afternoon lectures are held throughout the year. Topics are chosen by the interns and are presented by invited speakers or men of the attending staff. These are some of the topics selected:

Medicine

1. Geriatrics
2. Asthma
3. Early Diagnosis

Dermatology and Syphilis

With practical demonstrations

Neurology and Psychiatry

1. The Psychoneuroses—3 Lectures
2. Sciatica and conditions simulating it
3. Early Diagnosis of Brain Tumor

Pediatrics

1. Care of the New Born
2. Infant Feeding
3. Treatment and Management of Rheumatic Heart Disease in Children

Physiotherapy

Indication and use of Diathermy, heat, etc.

Traumatics

1. Low Back Pain
2. Hand Infections
3. Feet
4. Physiotherapy in Orthopedics
5. Casts
6. Surgery in Diabetics
7. Osteomyelitis
8. Prophylactic Orthopedic Treatment of Poliomyelitis
9. Treatment of Burns

Obstetrics and Gynecology

1. Therapeutic Use of Endocrine Products in Gynecology
2. Treatment of Abortions
3. Anesthesia and Analgesic in Obstetrics
4. Pre and Post-Natal Care
5. Menopausal Syndromes and Rx

Surgery

1. Conditions Simulating Acute Appendicitis
2. Pre and Post-Operative Care of Abdominal Cases

E. E. N. T.

1. Treatment of Common E. N. T. Condition
   a. Recurrent Epistaxis
   b. Running Ear (Chronic) etc.
2. Strabismus in children

Courses in Rx

Genito Urinary

1. Treatment of Gonorrhea
2. Nephrolithiasis
3. Kidney Tumors
4. Prostatic Hypertrophy in the Aged and its Management

Dental Surgery

Common Dental Conditions with which the private practitioner should be familiar

Tumor Service

1. Diseases of Bone and Bone Tumors
2. Conditions amenable to Radiation Therapy

Neuro Surgery

1. Head Injuries
2. Neurosurgery in Visceral Disease
   a. Angina Pectoris, etc.

Procedure, Regulations and Treatment of Compensation Cases

Medical Jurisprudence

Facilities the Board of Health offers to the Practicing Physician and his obligations to the Board of Health

Clinical conferences are held once a month and they are attended by the attending staff and interns of the hospital. Interesting and puzzling cases from the wards are presented and discussed. These conferences furnish a medium of discussion of unusual current cases in the hospital and an analyses of the condition and determination of procedures for future work.

There is also a weekly pathological conference at which interesting material is presented to the house staff and guests. These are very interesting and instructive.

The departments of pediatrics, obstetrics and gynecology, medicine and surgery, have their weekly or monthly conferences at which time attempts are made to teach the interns.

The out-patient work, a much neglected field among hospital interns, should be utilized. The intern should be assigned to this division for a definite period from six weeks to three months as part of his regular rotating service and preferably at the beginning of his second year internship, at

which time he would appreciate it most. Here he should learn X-ray, venereal diseases, office gynecology, urologic diagnosis, dermatology, allergy, proctology, physiotherapy, tumor, cystoscopy, electrocardiography, injection of varicose veins and such other specialties that the particular hospital affords. It is not unusual to find that an intern after completing his two year internship is not able to perform a diathermy treatment, treat a case of hay fever, treat an uncomplicated case of gonorrhea or read an electrocardiographic tracing. The average intern may attempt those treatments without realizing their limitations, which could be strongly impressed during their internship period. Others have to resort to the various circulars issued by drug houses relating to treatment of these specialties, and still others obtain information from the salesmen who sell the various apparatus.

In our institution, in view of these facts, we have decided to make use of our clinical facilities and have organized an out-patient department service which will be made part of the second year internship. This service will commence on January 1, 1936. A systematic program of instruction in the form of post-graduate training is being arranged and will include such specialties as mentioned below in the schedule:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
X-ray 9 A. M.	G. U.	X-ray	G. U.	Luetic	X-ray
Tumor 10 A. M.	Physio-therapy	Pre-Natal and Post-Natal	G. U. Physio-therapy	Tumor	Physio-therapy
Tumor 11 A. M.	Cystoscopy	Pre-Natal and Post-Natal	Physio-therapy	Tumor	Endocrine Gyn.
E.K.G. (1-2:00)	E.K.G. (1-2:00)	Fluoros-copy (2-3:00)	Varicose Veins (2-3:30)	Allergy (2-3:30)	Dentistry (1-2:00)
Gyn. (2-3:30)	Proctology	Skin (3-4:00)	Diabetic (3:30-4:30)	Neurology (3:30-5)	Skin (2-4:00)
Neurology	Proctology (2-4:00)	X-ray Technique		Neurology	Skin

The constructive method of dealing with the out-patient department problem for interns has been illustrated in the foregoing schedule with an attempt to utilize the maximum benefits from the wealth of material present in a general hospital out-patient department. In order to develop the out-patient department service in the future as a means of training for the intern, organization and cooperation between departments are most essential. This is merely a trial and should be continued with the hope of future development and improvement.

Summing up our present paper we find the following outstanding features:

(1) That all appointments to the medical and surgical staffs of a hospital should be based on merit.

(2) That instruction and development of younger staff men should be encouraged.

(3) The organization and proper utilization of the intern's time is very essential in order that he may derive the necessary benefits and opportunities the hospital has to offer.

(4) The out-patient department, a much neglected field among hospital interns, should be made part of the regular internship schedule, preferably at the beginning of the second year, under the direct supervision of the attending physicians in charge.

(5) Practical training in certain of the specialties encountered in general office practice is not being properly utilized in the present day hospital scheme of internship, such as venereal diseases, office gynecology, urologic diagnosis, dermatology, allergy, proctology, physiotherapy, electrocardiography, injection of varicose veins.

(6) The attending members of the staff of any hospital, (although they may not be connected with an outside teaching institution), should function as teachers and be charged with the responsibility of developing and continuing the training of interns.

In conclusion it may be said that we have already noted the initiative, the willingness to study and the spirit by the actions of our Junior members of the House Staff. They have organized weekly clinical conferences of their own at which time interesting cases from their individual services are presented and discussed either from the diagnostic, therapeutic or prognostic viewpoint.

Report of the Committee on Hospital Planning and Equipment

CHARLES F. NEERGAARD, Chairman

THE Committee on Air Conditioning, composed of Mr. Charles F. Neergaard, New York, *chairman;* Miss Mabel O. Hertsgaard, Fargo, N. D.; Dr. George A. MacIver, Worcester, Mass.; Dr. D. M. Morrill, Grand Rapids, Mich., and Mr. A. J. Swanson, Toronto, Can., made an exhaustive study of hospital planning to meet the requirements of the population and submits their report for 1936.

As a result of rapid expansion of hospital facilities, largely haphazard, uncoordinated and uncontrolled, there is now a condition of country-wide over-hospitalization, with many communities overburdened with more accommodations than they have been able to use in normal times and can readily support now.

The Purpose of This Report

The Committee on Hospital Planning and Equipment, which in the past has traditionally devoted its reports to the architectural and engineering aspects of hospital planning, now ventures to depart from these once-inspiring topics and in the light of past experience and present distress, to challenge some of the yardsticks on which we have long relied and some of the practices which we have been accepting with little question. Appraising and realizing our mistakes is the best insurance against their repetition. A further purpose is to suggest possible methods of making substantial savings in the National Hospital Budget which will in part offset the rising deficits. As the voluntary and general hospitals are numerically predominant, it seems appropriate to focus the discussion primarily on institutions caring for the acutely ill. The government hospitals, which maintain far more beds for nervous, mental, tubercular, and chronic patients than are available in general hospitals, will not be considered here.

Excess Hospital Beds

The most wasteful thing in a hospital is a bed which is never needed—yet our general hospitals have a *surplus* of 87,500 beds *over* and *above* those which must be kept in reserve. This surplus represents an idle investment of over four hundred million dollars and fixed charges in excess of sixty million dollars a year.

The following tables indicate that in good times and bad we have had beds far in excess of our needs:

GENERAL HOSPITAL BEDS AND THEIR USE*

	1928	1934
Total beds in 4361 and 4036 General Hospitals	363,000*	350,000*
Average daily patient census (66% and 60%)	240,000*	210,000*
Average beds unoccupied daily	123,000	140,000
Safe reserve, 25% of average census	60,000	52,500
Excess of beds beyond needs	63,000	87,500
Idle and non-productive investment @ $5,000 per bed**	$315,000,000	$437,500,000

An analysis of occupancy figures of a large number of City, Suburban and Rural Hospitals indicates that reserve beds equivalent to 25% of a *hospital's average census* is a liberal provision for peak demands. In the newer hospitals with a flexible arrangement of beds 20% will usually suffice.

The Overhead Cost of maintaining excess beds and buildings is of itself a major item. The Committee on the Cost of Medical Care has analyzed the elements of fixed charges, expenditures incurred in holding plant and equipment in readiness for patients. These constant "readiness-to-serve-costs" for light, heat, power, cleaning, salary, and maintenance of lay personnel, continue when beds are idle and do not materially increase when facilities are used to capacity. Their minimum estimate of these expenses in 57 New York hospitals in 1928 at one-fourth of the operating expense is unquestionably a conservative figure. The average annual costs per bed (in various sections of the country) ranges from $800 to $1,000 and in 1928 was $1,620 for the New York group. Thus hospitals must spend between $200 to $400 a year to maintain each bed, whether used or not.

The Committee computes capital charges at 5% interest and 3% depreciation, detailed as follows:

Investment per Bed	*Annual Fixed Charges per Bed*	*Daily per Capita Cost* 60% *Occupancy*	75% *Occupancy*
$ 2,000	$160	$ .73	$ .58
5,000	400	1.83	1.46
10,000	800	3.65	2.92

*Report of the Council on Medical Education of the American Medical Association.

**"Capital Investment in Hospitals" of the Committee on the Cost of Medical Care quotes $4,988 as the average cost per bed for General Hospitals registered in 1928.

Interest and depreciation are rarely if ever included in hospital statements, but are very real items in the communities' hospital bill. If these items *were* included in per capita operating expenses it would be found that relatively few patients paid the full cost of their hospital care. It, therefore, may be assumed that the average fixed cost per bed amounts to $700 a year, $300 for fixed operating or "readiness to serve" costs, and $400 for capital charges, based on an average investment of $5,000 per bed. This fixed cost would amount to $44,100,000 on the excess beds of 1928 and $61,250,000 on the excess beds of 1934. This unnecessary charge, which the general hospitals have unwittingly taken upon themselves, would have met the cost of 8,800,000 patient days' care in 1928, and 12,250,000 days' care, or over 18% of the work of the general hospitals, in 1934, at a $5 per diem cost. The foregoing represents the situation throughout the country. It is interesting to apply the same speculative analysis to New York City, using figures prepared by the United Hospital Fund for its member hospitals.

COMPARATIVE FIGURES FOR 57 HOSPITALS

Total Beds	13,527	16,030
Average in Use	10,382	11,061
Average Unoccupied	3,145	4,969
Needed for Reserve, 25% of Average Occupancy	2,595	2,765
Average Unused Beds in Excess of Reserve	550	2,204
Annual Fixed Operating Costs and Capital Charges at $700 per Excess Bed	$385,000	$1,542,800
Total Distributed by United Hospital Fund	$620,289	450,000

The proportion of excess beds is much smaller for United Hospital Fund members than for the country as a whole, but even this small excess represented annual fixed charges which amounted respectively to 62% and 340% of the amounts distributed by the Fund in 1928 and 1934.

During these years New York's population increased 1,456,000 (Exhibit "B", Pages 8-9) and new beds to the total of 7,012 were added at the rate of 4.8 per thousand of increase. Of the new beds 2,500 were in hospitals of the Fund. The capital investment in these additional Fund beds was over $15,000,000, the interest on which would be $750,000 as compared to $450,000 which the Fund distributed in 1934.

It is interesting to note that the 13,527 beds which were available in 1928 would have been sufficient to accommodate the average census of 1934, with 18% to spare. While this makes no allowance for the falling off in private patients due to the depression, it is at least suggestive.

Empty Beds and Major Financial Problems

Fundamental to the hospital's "readiness to serve" is a quota of empty beds. But how many are actually needed? The newer buildings, with an elastic arrangement of rooms and small wards, have frequently operated at eighty-five to ninety per cent capacity, while older buildings, with large old-fashioned ward units, have found it possible to administer an average eighty-five to eighty-five per cent load. Although twenty per cent of capacity or twenty-five per cent of average demand is demonstrably a liberal reserve, we have been maintaining for the country as a whole in non-government hospitals some thirty-five per cent of our beds idle in normal times, and forty to fifty per cent during the depression. These figures are distinctly a "stop signal."

Unquestionably many more of the acutely ill should be cared for in hospitals than are admitted each year and among the various reasons why this is not the case the chief is that of expense. One authority has stated that if all who needed hospital care could have it, hospital occupancy would be doubled. The problem for the future is to find ways to reduce the National Hospital Budget—to lower hospital rates and make hospital service more available to those above the charity level.

Business and industry have devised many expedients for deflating costs—aside from cutting the payroll. Voluntary hospitals must do likewise. Group hospital insurance where fully organized should contribute substantially to earnings but the hospitals as a group must find some methods of lowering their costs substantially and permanently.

There are many serious burdens in the expense column which we have always more or less taken for granted and in most large cities some or all of the following money-saving measures can be brought about under the present pressure of economic necessity if there be intelligent and determined leadership and institutional teamwork.

(a) Better coordination of hospital service between public and private hospitals.

(b) Closer cooperation between the hospitals of each community to minimize duplication and reduce expenses through central purchasing and collections and the interchange of comparative cost figures, etc.

(c) The provision of adequate accommodations for chronic and convalescent patients.

(d) The closing of uneconomical and unneeded hospitals to eliminate excess beds.

(e) The requirement of a "Certificate of Necessity" for any proposed increase of hospital facilities.

(f) A more careful determination of facilities actually needed prior to new construction.

(g) More efficient and elastic planning of new buildings to insure a high average occupancy, and improved methods of construction to minimize operating and maintenance costs.

Voluntary hospitals are facing a crisis. For some, continued existence is doubtful. The future presents a new set of conditions and many uncertainties and it is high time to apply our best powers of analysis and substitute group thinking for individual thinking and community planning for the isolationist attitude of the past. It is obvious that if our hospitals are to continue their present high standards better coordination of general health and care of the sick must be brought about to more effectively spread the community health dollar over public medical service, private practice and hospitalization. Some of the economy moves listed above are outside the scope of this Committee. Those that have a clear relation to hospital planning merit elucidation.

Coordination

In the large cities public hospitals and clinics are crowded beyond measure while voluntary hospitals have half to two-thirds of their rooms standing empty. Many cities are seeking federal loans to enlarge public hospitals,—but why? There are beds enough and to spare to tide us over if this is but a temporary dislocation of prosperity. Let the voluntary hospital move its semi-private patients into private rooms, its pay ward cases into semi-private quarters, and make its surplus available in general wards to relieve the pressure in the city institutions. This need not be a permanent readjustment of either space or rates but will permit the voluntary hospital to act as an expansion joint between the present peak charity load and the greater private demand of normal times. If the depression is to be permanent all the more reason for making do what we have, rather than sinking in additional buildings funds which are far more needed for maintenance. The average city, large or small, has beds enough,—the need is for more elasticity in their use and for more public funds to care for public charges in private hospital beds.

Our financial pressure has become so acute that it must be considered as a common problem rather than in terms of the individual institution. In the past each hospital, proud of its accomplishments, jealous of its prerogatives, has gone its own way and frequently maintained a competitive attitude towards its neighbors. "Bigger, better, and more complete" has been the underlying motive. New departments, new apparatus, everything that science has devised for the treatment of patients in many fields of medicine, have constantly been added; admirable if the new facilities fill a real need but not justified if leading to unnecessary duplication.

Much costly equipment is used only a few hours a week, yet in many large cities highly specialized departments are found several times duplicated within the radius of a mile, where one would serve every need,—and the community must pay for them all. Whatever may be the future expansion of public hospitals for the care of the poor the voluntary hospital must continue to meet the demands of the private patient and absorb the overflow from the public hospital wards. It is therefore of vital importance that each hospital should function as a coordinated unit of the community's health service supplementing rather than competing with the others. The economies which a community can effect through proper integration of its hospital service are very great but difficult to compute.

The establishment of hospital zones for the better control of out-patient admissions would eliminate much duplication of costly medical effort and diagnostic procedures. This is so self-evident as to require no elucidation. The closer cooperation of hospitals in their common problems; in central purchasing of supplies and collection of accounts, in the inter change of current departmental costs and payroll rates have been found to produce surprising savings.

Chronic and Convalescent Care

Insufficient provision for chronics and convalescents in most sections of the country is one of our greatest handicaps. Many patients who require but a few days' care in the acute hospital at $5.00 a day could then be moved to a convalescent home where the cost is around $2.00 a day. Many chronic cases are held for weeks in acute beds at an unnecessarily high cost. Many of each class are receiving care in their homes because of the lack of institutional beds. The average community needs more of these special hospitals, and in future this type of institution might well be planned to provide extra beds for acute patients in times of crisis.

In the present emergency general hospitals, not sufficiently patronized, might profitably set aside certain sections or wards for chronic patients, not a few of whom are able to pay a low rate. Again, where a community has a constant excess of acute beds one or more of its general hospitals with buildings and grounds suited for the purpose, might well be converted to the care of chronic and convalescent patients, relieving acute services of a costly burden.

Mergers and Adjustments

In every large city there are usually one or more weak hospitals which continue to exist not because

the community needs them but primarily because their trustees and doctors either fail to see the picture or want to hold their jobs. Some of these have already closed their doors but others continue a hand-to-mouth existence giving meager care to their patients and deep concern to their sponsors. Their struggle for existence persists as long as public and private support are forthcoming.

A concrete example of the possibilities of correcting such economic inconsistencies is a community-wide plan now under consideration in a certain large city where the hospital situation is unusually serious. It maintains 70 acute hospitals—public, voluntary and proprietary, with over 13,000 beds representing a capital investment of more than $115,000,000 and costing each year over $16,000,000. The hospital accommodations actually care for a daily average of 9,000 patients of whom upwards of 1,000 are chronics and convalescents who occupy acute beds at an expense of $5.00 a day, although they could be equally well or more effectively cared for in special institutions at $2.00. After allowing a 25 per cent reserve and assuming the transfer of the chronic and convalescent patients the community is maintaining 3,000 more acute beds than it needs. The plan, sponsored by a committee representing the County Medical Society, the Chamber of Commerce and the Community Chest, contemplates the closing of a number of small, poorly equipped hospitals, the transfer of their work to the larger and better equipped institutions in the same general districts and the conversion of certain acute hospitals having appropriate buildings and spacious grounds to the care of chronics and convalescents. The final result will be the withdrawal of some 1,500 acute beds from service—about half of the present surplus. The saving in overhead in the hospitals closed, in the care of patients at a reduced average per capita cost in the "base hospitals," whose occupancy will be increased from about 55 per cent to 75 per cent, and in chronic and convalescent care at $2.00 instead of $5.00 a day, will effect total savings of over $1,800,000 a year—considerably more *than the Community Chest distributes among its member hospitals.* So extensive and radical a readjustment obviously involves many problems of personal sacrifice. It will undoubtedly meet with strenuous opposition. The program is being approached with extreme care and deliberation by a disinterested group whose only consideration is the welfare of the community as a whole, recognizing that those who give and those who pay the taxes may properly demand that the hospital house be put in order.

The Council on Community Relations and Administrative Practice of this Association is energetically endeavoring to foster the coordination of hospital effort, particularly through the formation of local hospital councils. Many of these bodies composed of laymen hospital administrators and doctors have been active and successful in bettering conditions in their communities.

How Many Beds Are Needed

For many years bed quotas have been adopted on the basis of two generally accepted formulae established by Public Health authorities—

First: that from 2 per cent to 3 per cent of the population are at all times incapacitated by accident and illness, of whom about 10 per cent require hospitalization in acute beds.

Second: that in urban communities 5 acute beds per 1,000 of population and in rural districts from 1 to 3 beds are necessary for the adequate care of medical and surgical conditions and childbirth.

The present situation in the hospital field indicates that both the formulae themselves and the way they have been used are in need of revision. It is quite obvious that conditions vary too widely in each district and in different sections of the country to make uniform yardsticks of general practical application. Yet it is probable that much of our over-building is due to their ill considered use.

For a community of 100,000—the first formula would forecast 250 patients a day while the second would provide two acute beds for each patient. "Five beds per thousand" is apt to prove as inaccurate and misleading in determining a quota as a $5,000 cost per bed" for a construction estimate.

Of our hundred twenty millions of people, some 60 per cent live in rural communities and small towns, and 40 per cent in cities and towns of over 10,000 population. The distribution and use of hospital beds is as follows:

	Number of Beds	Occupancy	Population	Beds per 1,000
Rural	68,806	50.2%	72,000,000	.95
Urban	282,023	62.4%	48,000,000	5.8

Thus with rural hospital averaging less than one bed per thousand but half-filled and urban hospitals with 5.8 beds per thousand occupied at 62.4 per cent the general over supply is clearly indicated.

The situation in eight of the less populated states shown in Exhibit "C", Pages 8-9, gives further confirmation.

However we may have arrived where we now find ourselves, the situation is critical and demands correction for the future.

A paper presented by a leading public health authority at the New England Health Institute in 1930 outlined the following:

EXHIBIT A

FIGURES FROM MEMBER HOSPITALS OF THE UNITED HOSPITAL FUND, NEW YORK

	1912	1914	1916	1918	1920	1922	1924	1926	1928	1930	1932	1934
Number of Hospitals.....	47	46	46	44	56	56	56	55	57	57	56	53
Total Beds	7,026	7,224	7,865	8,364	10,557	10,832	11,995	11,978	13,527	14,917	15,845	16,030
Percentage of Occupancy..	79%	80%	83%	80%	77%	78%	76%	78%	77%	73%	68%	69%
Average Days Stay.....	19	18	17	16.6	15.9	15.3	14.9	14.8	13.9	13.8	13.6	13.6
Average Cost per Day....$	2.11	$ 2.24	$ 2.47	$ 3.20	$ 4.27	$ 4.34	$ 4.81	$ 5.26	$ 5.77	$ 6.10	$ 5.40	$ 5.52
Average Cost per Patient..$	40.09	$40.32	$41.99	$53.12	$67.89	$66.40	$71.67	$77.85	$80.22	$84.18	$73.44	$75.07

EXHIBIT B

RELATION OF BEDS AND BED PATIENTS TO POPULATION IN NEW YORK CITY

Population—New York City	(a)	5,830,572	5,924,138	6,017,702	6,930,446	7,218,000	7,473,791
Total Beds and Cribs in Public and Private Hospitals	(b)			34,501			41,513
Number of Beds per 1,000 of population				5.7			5.5
Number of Bed Patients	(c)	486,742	519,222	582,830	632,308	675,249	689,526
Ratio of Bed Patients to Population		1 to 12	1 to 11.2	1 to 10.3	1 to 10.9	1 to 10.7	1 to 10.9

The ratio of Bed Patients to Population is materially affected by the large number of patients from the suburban districts as well as from the country at large. Only one out of 21 people were admitted for acute illness by all Hospitals in the country.

(a) Population figures, except in census year 1930, are from New York City Directory.

(b) Exclusive of Proprietary, Insane and Federal.

(c) Hospital Information Bureau Reports.

EXHIBIT C

FROM THE 1935 HOSPITAL NUMBER OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Some typical rates of occupancy in General Hospitals

	No. Hospitals	Rates of Occupancy		No. Hospitals	Rates of Occupancy
Alabama	30 urban hospitals	50 per cent	Mississippi	32 urban hospitals	43.3 per cent
	30 rural hospitals	32 per cent		33 rural hospitals	28.4 per cent
Georgia	36 urban hospitals	53 per cent	Missouri	52 urban hospitals	61.8 per cent
	39 rural hospitals	37.5 per cent		38 rural hospitals	44.6 per cent
Kansas	39 urban hospitals	50.3 per cent	North Carolina	45 urban hospitals	55.3 per cent
	52 rural hospitals	43.9 per cent		55 rural hospitals	49.5 per cent
Louisiana	22 urban hospitals	82.9 per cent	Texas	86 urban hospitals	49.8 per cent
	16 rural hospitals	28.9 per cent		123 rural hospitals	31.4 per cent

"The best information available indicates that 1,779 counties have one or more General Hospitals located within their borders and that 1,296 counties have none—but probably most of them are well covered with hospital service, as county boundaries are merely imaginary and do not constitute barriers. Adequate hospitalization is based on the availability of facilities through existing means of transportation."

Estimated Needs for Organized Care of the Sick in a City of 100,000 Population

		Hospital Beds
For General medical, surgical, children and maternity		500
Children	50	
Maternity	44	
Communicable diseases		50
Tuberculosis		80
Chronic sick		200
Convalescent		75
Mental		600
		1,505

Certain of these figures may be questioned.

We have long assumed that 10 per cent of the beds in a general hospital should be assigned to children. Actually the average hospital is unable to keep so many even half-filled. The demand for maternity beds has been constantly increasing, yet in the near future a falling birth rate and the extension of good maternity home nursing will probably change this trend.

Preventive medicine keeping people well, and the steady decline in the average stay of the general hospital patient, must be taken into consideration. The records of the United Hospital Fund of New York show some very significant trends (Exhibit "A", Pages 8-9). The average patient received 19 days' care in 1912 and but 13.6 days in 1934 one of many factors being the increase in minor operations. Thus each hospital bed can now accommodate 26.8 patients a year instead of 19, representing a forty per cent gain in capacity. The average total cost per patient was $40.09 in 1912 and $75.07 in 1934. In two decades the patient has been saved nearly a week in the hospital but the increase in what the hospital does for him and the cost of doing it has nearly doubled in dollars, whatever may be their comparative purchasing power.

The vast program of hospital construction of the Federal Government has added to the country-wide surplus of beds. Countless non-service disability patients are being taken away from their family physicians, their home surroundings and their local hospitals where, in the majority of instances they could be equally well and certainly more economically cared for then in the Governmental Caravansaries.

Community Survey

To intelligently determine how many beds a given community needs requires that many conditions be analyzed far in advance of the first architectural sketch. There are involved considerations of the size, racial groups and rate of growth of the population, its economic status and intelligence, the character of its housing and industries, its transient visitors and dependent districts, its present hospital facilities and to what extent they are used, its morbidity levels and the number and caliber of its medical profession.

In large cities whose medical centers and eminent specialists draw patients from all over the country, as well as from many suburban communities each served by one or more local hospitals, the determination is particularly complex.

In New York for example (Exhibit "B", Pages 8-9) during 1934 the total patients cared for was equivalent to one of every 10.9 of the local population. How many patients come from outside the city limits cannot even be approximated. From New York's experience 5 acute beds for each 1,000 of its population would appear adequate—whereas the present number in use or under construction is between 5½ and 6 per 1,000.

In the smaller cities and rural districts it is usually possible to ascertain from the records of local physicians and hospitals in near-by centers to what extent beds have been used and should be provided. Henceforth let us urge that community needs be determined by means of a careful survey and competent interpretation of the facts rather than by population ratios alone.

New Yardsticks

In the light of the conditions found this Committee would recommend the following revisions of the formulae of "Acute beds per 1,000 of population":

For large Metropolitan Centers having general multiple housing, extensive suburbs and nation-wide medical protege—5 beds per 1,000 of the city's census.

For cities which serve as Medical Centers for extensive districts and suburbs not adequately self-hospitalized—4 to 5 beds per 1,000.

For smaller cities—3 to 4 beds per 1,000.

For Rural Districts up to 1 bed per 1,000.

The city ratios, based on the *city census* only should provide sufficient beds for patients from the suburbs and elsewhere. The Committee would emphasize that these ratios should be used only to suggest and not determine bed quotas—and would offer the thought that it is far more economical for a hospital to be over-crowded for a relatively few days each year than to be over-bedded every day.

"Certificates of Necessity"

Where a city has a Community Chest there rests upon its management a responsibility to the contributing public, implied at least, that the institutions supported shall be intelligently conceived and carefully and thriftily managed. That this mandate has not always been recognized is common knowledge. Each hospital has usually been a law unto itself, resenting any outside interference in its af-

fairs. But in the light of the present situation of over-hospitalization it is imperative that future expansion be intelligently and rigidly controlled and a "Certificate of Necessity" issued by some authoritative body after a careful study of the resources and needs of the community. One example will indicate the value of such procedure.

Two hospitals were to be merged in a Community Chest City seriously over-hospitalized—one of 50 beds with a five-year record of sixty-two per cent occupancy and the other of 200 beds which had been used but forty-six per cent during the same period. Their combined service had never averaged more than 125 patients. An addition was planned on the grounds of the large hospital, increasing the capacity to 350 beds. An unsuccessful campaign for funds realized but half what was needed, yet the building was erected, heavily mortgaged and has been a needless burden ever since. Not only were the trustees guilty of bad judgment but the professional staff equally culpable, for while fully cognizant that their combined practice was far from sufficient to fill the old hospitals, to say nothing of the greatly increased capacity of the new one, they made no effort to recruit additional members, organize new services and build up an adequate volume of work until several years after the hospital had been completed and opened.

The generous donor is not always a public benefactor. The gift of funds to erect a memorial wing, however little it may be needed, is something no hospital would refuse. Suggestive at least is the fact that Yale University for many years has required that the donor shall endow the maintenance of his memorial as well as financing its construction.

The Annual Reports of Hospital Service in the United States for 1934, of the Council on Medical Education and Hospitals states:

"that the geographical distribution of hospitals shows an adequate and usually satisfactory hospital service conveniently accessible for ninety-six per cent of the population but it emphasizes the warning that:

"Only in very exceptional areas are additional rural hospitals needed and none should be constructed unless after a careful survey by competent hospital authorities, it is found that the population is large enough to justify the use of Government or private funds for this purpose; and, more important, if there is sufficient medical talent within the area to adequately staff the hospital and render efficient professional service to the patient."

This Association should adopt and promulgate the principle, *"that consideration of Community Planning should invariably dictate the planning and development of the individual hospital and recommend that where hospital expansion is proposed the Hospital Council—or lacking such—a Special Committee representative of the State or County Hospital Association, the Chamber of Commerce, Community Chest and Service Clubs should direct a survey by a competent hospital authority and issue a 'Certificate of Necessity' for such additional facilities as the Survey may justify."*

Better Planning of Hospital Buildings

The cost of general over-expansion has been demonstrated. It is equally important that each hospital be planned so that it will be just large enough to carry its load, and can be operated at a minimum expense. What this may mean is exemplified by a new general hospital in Maryland.

It is the only one in the district and serves a city, town and rural population of 67,800. The old building, inelastic in plan, had 125 beds with an average occupancy for 5 years of sixty-five per cent. During this period there were 89 days each year when the census exceeded 90 and 10 days when it ranged from 100 to 110. An exhaustive survey, making due allowance for the increased patronage of a new hospital, forecast an average of 110 patients. Following the old yardsticks for capacity, whether sixty-five per cent occupancy be from accident or design, the new buildings should have provided 170 beds. Following the conventional standards of planning, construction and equipment a building fund of $850,000 would have been required at $5,000 a bed. The plan adopted had a normal capacity of 135 beds and the total cost was $575,000 or $4,250 a bed. The plan is flexible. The private rooms are of the convertible type, accommodating one or two patients according to the demand. The wards, similarly elastic, are designed for either four or five patients. Bed storage space on each floor facilitates the convenient expansion or reduction of the room and ward capacities. The normal of 135 can be increased to accommodate 150 and in emergencies to 176, by placing beds in the visitors' rooms and solaria.

The building is compact with simplified mechanical equipment, hot water heat, walls, and windows insulated against heat loss, making it warm in winter and cold in summer, limited air conditioning, and effective noise control. The operating economies inherent in the structure and its mechanical plant should result in expenses at least $5,000 a year less than usual. The saving in the initial investment of $275,000 over the old standards, will yield an income of $13,750—a substantial contribution towards the annual deficit.

The Ideal Plan

A well-planned hospital is essentially a practical hospital, requiring a sound minimum investment for construction and a minimum expenditure for overhead and maintenance through its life. The general hospital of the future should be above all flexible so that each bed can accommodate the maximum number of patients a year, and fewer beds be required to carry an average given load. The large wards assigned to different ages, sexes, and diagnoses should be replaced by smaller units, making it possible for a crowded surgical service to use vacant beds on a less crowded medical floor, and to avoid such embarrassments as carrying a waiting list on the male service while beds stand empty in the women's wing. Given a properly elastic arrangement we can get along with small hospitals which can function up to ninety per cent capacity without overcrowding. The building should be quiet and compact, with all departments properly articulated to insure efficient and convenient care of the patient; the lines of travel of visitors, staff and supplies must be carefully studied to avoid congestion and confusion. There must be properly grouped elevators, properly planned food service and adequate storage space. Much has been learned over the years by architects, engineers and consultants in the evolution of the hospital plan—errors to be avoided and improvements to be adopted. But in spite of our abundant knowledge there are far too many recent examples of extravagant structural expenditure, with almost complete disregard of administration economy. Architects, true to the immortal precept of Burnham, continue to "make no little plans" and too often persist in the use of excess cube and space, which achieves only the "monumental glorification" of the designer.

The facts presented in this Report are new only in their interpretations. The Committee has aimed to emphasize the broader financial aspects of the hospital malady of over-expansion and to indicate where and how the individual community and the country as a whole can bring about some of the major retrenchments urgently needed if we are to cut down our costs and reduce our rates so that more of the people will be able to have and pay for hospital care when they require it.

Hospitalization in the Municipal Hospitals in Metropolitan New York

DR. S. S. GOLDWATER, Commissioner of Hospitals of New York City, in submitting his 1935 annual report, shows a remarkable achievement in the improvement of the hospital system in that city, and in the development of standards for hospital care in municipal hospitals.

In its approach to rule-making, the Department recognizes the desirability of a degree of flexibility in hospital administration; sound hospital administration requires agreement on basic principles rather than in the details of local practice. A test of any hospital rule is its effect upon morale and economy. In the final analysis a hospital rule should promote the welfare of the sick.

The report states that fully one-half of the population of the City of New York looks to the Department of Hospitals for both hospital care and ambulatory medical treatment.

The total bed capacity was affected in 1935 chiefly by the closing of the Children's Hospital on Randall's Island and the opening of the Queens General Hospital. The official bed capacity, 18,986 as of December, 1935, will be increased with the opening of additions to Harlem Hospital, Lincoln Hospital, and the remodeled building of the Brooklyn Cancer Institute.

The average daily census of patients and inmates was 17,930. At one time or another practically every institution in the Department has been obliged to admit patients beyond normal capacity.

In-patients admitted in 1935 totaled 243,801; the number of days of hospital and institutional care was 6,544,472.

The average duration of hospital and institutional care was 25.1 days. The corresponding figure for 1934 was 27.1 days.

(a) Bellevue, with 2333 beds, has under construction a new tuberculosis unit, which will add about 300 patients' beds and which is being built with the aid of a PWA grant at a cost of approximately $4,000,000. This composite building will contain a new central admitting department, new kitchens, operating rooms, and laboratories, and quarters for nurses and residents.

(b) A new children's building has been started at Sea View, Staten Island's great tuberculosis center, which will add 250 beds to Sea View's present capacity of 1446 beds.

With the aid of PWA funds, a Cancer Institute is being built and equipped at Kings County Hospital, with a capacity of nearly 100 beds.

Finally, a model hospital for chronic diseases, with a capacity of 1600 beds, is being planned for erection on Welfare Island on the site of the old penitentiary. PWA funds for a nurses' home and a power plant to serve this new institution have been obtained.

The Department has continued its close scrutiny of patients reported by voluntary hospitals as city cases. It is estimated that the cases approved by this Department for payment involve a total expenditure on the part of the municipality of $6,093,000. This may be compared with the Department's own budget of $19,569,000.

Vacant space in contagious disease hospitals, periodically available because of fluctuations in the incidence of contagious diseases, have been utilized for tuberculosis cases.

The technics of asepsis and of disinfection are constant objects of attention. A recent survey showed lack of uniformity in the method of treating blankets in laundries; blankets in many cases were subjected to such high temperatures that on their return they showed loss of softness and marked shrinkage. The laboratories at Willard Parker Hospital and Kingston Avenue Hospital made bacterial counts of the rinsings and it was found that it was not necessary to subject blankets to the high temperatures previously employed.

Improvement in medical and nursing technic has resulted in a minimum of cross infections thus shortening patient days in hospital. The percentage of acute communicable disease cases which contracted cross infections due to exposure in the hospitals during eleven months of 1935 is as follows: At Willard Parker, 0.85; at Kingston Avenue, 0.76, at Queensboro, 1.11. This is conceded an excellent showing.

The Dietary Division has served 89,724 meals daily, or 32,749,260 meals during the year. The cost of food supplies was as follows:

1. Patients—Medical and Surgical	.2624	per day
2. Patients—Tuberculosis	.4246	" "
3. Inmates of Custodial Institutions	.1983	" "
4. Staff and Nurses	.3521	" "
5. Employees	.2564	" "

Calculated diets of special therapeutic content, averaging fifteen per cent of the total average patient feedings, cost from forty-five cents to seventy-five cents a day.

Out-patient services registered 423,732 first visits in 1935, and 2,428,526 total visits.

Analysis of the anesthesia service at Bellevue Hospital showed that the old staff, consisting of a medical anesthetist, assisted by nurses, was "incapable of developing and supporting an adequate program, incapable of utilizing the latest advances in anesthetic technique or of contributing to the teaching of the science and art of anesthesia." A new service was arranged with an exclusively medical personnel.

Investigation of dispensary applicants to determine eligibility has now been instituted in all of the public hospitals. Field visits are made on doubtful cases. Monthly reports include a digest of rejections. Due in a measure to the "police value" or investigations, there has been a decrease in the number of applicants of about 11.3 per cent; rejections for all reasons have been approximately 12.7 per cent.

The total cost of medical and surgical supplies in 1935 was approximately $1,214,000. This expenditure was spread over nearly ten million units of treatment, considering each day's care in a hospital and each dispensary consultation as a unit of treatment. In such "units" there are included single days of treatment representing an outlay of $30, $40 or $50, as in the case of a major surgical operation, supplemented by a transfusion and the employment of a special nurse. For the Department as a whole the average cost of medical and surgical supplies for each unit of treatment may be put, approximately, at 13.6 cents. This can hardly be regarded as excessive.

The sum of $108,000 was allocated to the Department in 1935 for the purchase of blood from donors for emergency treatment. This did not suffice to satisfy clinical requests. The corresponding 1936 item is $115,000.

The annual death rate (all types of institutions included) was 6.9 per cent. The corresponding rate for 1934 was 7.3 per cent.

The budget of the Department for 1935 was $19,348,969.95. Of this total $12,268,513.95 was allocated to salaries and wages and the balance to maintenance and supplies. The rising costs of food and other commodities and increased consumption of medical and surgical supplies compelled the Department to request a supplementary appropriation for $410,000 to balance its accounts for the year. The total actual cost of budgetary items for the year (subject to final adjustment) is now estimated at $19,569,000.

Expenditures for in-patient care were $18,309,558; for out-patient service, $771,192; private hospital ambulance service cost, $318,250; inspection and other miscellaneous services, $318,250. Salaries and wages throughout the Department remained practically stationary.

The per capita per diem cost for all patients and inmates was $2.80. Extremes of cost are represented by the acute hospital services on the one hand and custodial institutions on the other.

Legal Decisions of Interest to Hospitals

Hospital v. Early, 197 N. E. 641, Supreme Judicial Court of Massachusetts, 1935. This was an action of contract brought by plaintiff hospital against W. P. Early, to recover for board, room, and services furnished to his wife. Upon a trial of the case plaintiff had a verdict for $408.43, to which verdict defendant took exceptions upon the ground that under the issues raised by the pleadings, and because of their scope, his defense of negligence on the part of the hospital, being directed to the value of plaintiff's services, was admissible. On appeal, the Supreme Judicial Court of Massachusetts reversed the lower court, holding that the evidence offered by defendant as to the worth of the plaintiff's services should have been admitted.

Defendant answered the allegations of the hospital's declaration by a general denial, and alleged further that by reason of the negligence of plaintiff hospital's servants his wife's leg had been burned so severely as to require amputation. It was conceded that the services rendered were reasonably worth the amount asked, but it was contended that their worth was offset by reason of the negligence referred to above.

Thus does this case raise primarily a question of the art of pleading, a subject which the writer hesitates to comment upon here because of its numerous refinements and niceties, which serve at best to confuse the lay reader. However, because of the result reached by the Massachusetts court, which is in itself of importance to the charitable institution, it is believed that some discussion should be offered upon the real problem of the case, which bears upon the adjective, or procedural law, rather than upon the substantive law.

First, it is to be said that Massachusetts early favored the doctrine of exemption from liability of charitable institutions for the negligence of their servants or employees. Second, as a matter of pleading, the Supreme Court of Massachusetts, in a number of decisions, had determined that where a person sues upon an implied contract, no agreed price being fixed, and the defendant pleads what is known as the general issue (a denial of the allegations upon which the plaintiff bases his recovery), the question thus raised would be, "What is the reasonable value of the plaintiff's services, etc.?" It had also been decided in this state that evidence offered by the defendant showing lack of skill, or defective workmanship, or defective materials furnished by the plaintiff, was such matter as could be offered by the defendant under his plea of the general issue, without the requirement of first introducing such evidence by a special plea in the nature of a recoupment for damages.

Counsel for the hospital argued that the hospital was a charitable institution, and so, exempt from liability for the negligence of its servants or employees; that the evidence offered by defendant was properly the subject of a recoupment for damages suffered, and that a plea setting up recoupment for damages could be maintained only where a cross action could be had against the plaintiff; that since a cross action against the plaintiff would, being affirmative in nature, constitute practically a direct suit based upon the negligence of the hospital it could not succeed under the rule exempting charitable hospitals from liability for negligence.

Now there is ample authority to sustain the plaintiff's proposition that a recoupment, or a cross action, is an affirmative counter suit against the plaintiff by the defendant. That being the rule, and it further appearing that charitable hospitals are not generally liable for the negligence of their employes, it should follow logically that defendant has no defense to the suit of the hospital in this case.

However, the Massachusetts court points out that since plaintiff is suing only for the reasonable value of its services, it is open to the defendant to question the worth of such services by the introduction of evidence to show that because of negligence on the part of the hospital such services were worthless, and that such evidence is competent under the issues as raised upon the trial, requiring no special introductory plea to insure its admissibility.

It would seem that in order to preserve consistency of decision in one field of law (that of pleading), the Supreme Judicial Court of Massachusetts has sacrificed consistency in the field of hospital law, or, more broadly, in the field of law applicable to charitable institutions generally. The Court says in one breath that charitable hospitals are not to be liable for their negligent acts, but when a plaintiff charitable hospital seeks to recover upon a contract, it having been negligent in the rendition of its services under that contract, then the defendant who has suffered damage by reason of the negligence may set up such damages in answer to the plaintiff's demand. If the dictates of logic commanded at this point, it would of necessity follow that no offset of damage should be allowed to the defendant, for such offset is based upon the negligent act of the hospital, which act under Massachusetts law cannot be the

foundation for the maintenance of an affirmative suit against the charitable hospital.

In re Harrington's Will, 276 N. Y. S. 868, 243 App. Div. 235 (1935). This was a proceeding in the Surrogate's Court of Oneida county, New York, by an administrator, against the hospital and another to have the will of Florence B. Harrington judicially construed. In the Surrogate's Court a decree was entered favoring the contentions of George E. Bacon, administrator, which decree was reversed.

By the sixth paragraph of her will the testatrix gave a life estate in certain real and personal property to a niece. Upon the death of this niece, the remainder interest, converted into money, was to go "to the R Hospital and the managers and trustees thereof by whatsoever name known in trust however to build with said monies and proceeds an annex or addition to said R Hospital building in memory of my late husband George A. Harrington and for no other use or purpose, said annex or addition to be known as the 'Harrington Annex' or 'Harrington Addition'."

It appeared that the R Hospital had been incorporated as a charitable institution in 1884, and was so operated until January 1, 1929, at which time it leased its real and personal property to the city for two years. In December of 1930 the R Hospital deeded its property to the city, the deed providing that the municipality should maintain the premises forever for a hospital, or if sold, then the proceeds were to be used to establish a municipal hospital, and for no other purpose. It was further shown that the R Hospital had never been dissolved, but to the contrary, was engaged in administering certain trust funds required by way of gifts, bequests, and legacies. The niece of testatrix died in 1932, at which time the remainder interest was to pass to and vest in the R Hospital.

The question thus presented, in view of the fact that the managers and trustees of the R Hospital did not employ the funds so given to the hospital by the will, is whether the gift lapsed; for at the time of vesting of the gift, the R Hospital had deeded its property to the city. If the gift lapsed by reason of the hospital being unable to use it as the testatrix intended, or by reason of the charitable purpose being impossible of attainment, then the administrator of the estate would prevail as against the hospital.

In answering this question, reference must be made to that doctrine of equity known as the *cy pres* (near to it) doctrine. The principle involved is that where a testatrix has expressed two objects, one primary or general, and the other secondary or particular, and which are incompatible, or impossible of attainment, then the particular is to be disregarded in order that effect may be given to the general object. Thus, in the instant case, the particular object was to bequeath a fund to the R Hospital to the memory of the testatrix' husband, while the general object was to bequeath a sum of money for charitable purposes.

The Hospital contended that the gift demonstrated clearly that the testratrix had in mind a charitable expression of her bounty, and that such expression was capable of being carried out literally, or if not literally, then *cy pres* (as near as may be), or generally, in accord with the charitable intent.

It is the settled rule in New York that where a legacy has lapsed, then this *cy pres* doctrine cannot be called upon in order to sustain the gift. Thus does the question of lapse become material.

That the legacy did not lapse is clear. The Hospital was in existence as a charitable institution at the time when the will became operative, and is still in existence as a charitable corporation, having functioned as a hospital until 1929, and now administering certain funds in trust. When the niece died in 1932, the remainder interest created by the testatrix in paragraph six of her will, vested in the Hospital, so that there could be no lapse.

The court suggests a final question: the impediment arising out of an attempt to enforce a charitable bequest upon the beneficiary's property. If the beneficiary is willing to accept the gift with its terms and restrictions, then the obstacle disappears. But the donee of the gift cannot be forced to take it. Here, the R Hospital, its trustees and managers are charged with a duty to see that the Harrington Annex is added to the hospital now under control of the city. This can be done by reason of the provision in the deed from the R Hospital to the city that the property is to be used as a hospital, and for no other use.

The principle to be noted is that a gift to a charitable institution will not be defeated by reason of the fact that the original trustees (of the R Hospital) were no longer actively interested in the hospital property, having deeded it to the city, and were not disposed to actively administer the trust, for in such case the court will itself act to administer the gift if it can do so without destroying the general charitable intention of the testator.

The instant case was sent back to the Surrogate's Court of Oneida county, New York, the decree of that court that the legacy be considered as lapsed being reversed. An appeal was then taken from the Surrogate's Court to the Supreme Court, Appellate Division, where the court followed its earlier decision that there was no lapse, and that the court

should administer the trust created by the testatrix' will. *In re Harrington's Will. Hospital et al. v. Bacon,* 281 N. Y. S. 93 (1935).

Hoke v. Hospital, Inc., 281 Ill. App. 247 (1935). The plaintiff, Lewis Hoke, sued for damages alleged to have resulted from X-ray burns. Plaintiff had a verdict and judgment in the circuit court of Saline county, Illinois, for $4,000. An appeal was taken by the hospital to the Appellate Court, Fourth District, which court reversed the judgment of the circuit court.

Defendant corporation owned and controlled a hospital which was operated for profit. In obtaining the X-ray service plaintiff paid the customary fee. As the basis for his case, plaintiff alleged that the hospital maintained and operated the X-ray machine, and that in treating him the defendant was so negligent as to burn him severely. Defendant answered, alleging that it did not own nor control the machine and that plaintiff did not apply to it for treatment, but was a patient of one Dr. R. B. Nyberg.

The question presented is whether Dr. Nyberg is to be considered as an agent of the hospital, since in order to establish liability of the hospital, plaintiff must show that Dr. Nyberg acted on behalf of the institution. If agency can be established, the hospital is liable, since it is not a charitable institution and cannot invoke exemption from liability for the negligence of its agents or servants. To answer this question, reference must be made to other facts bearing specifically upon the agency relation.

Defendant owned a building, the first floor of which was rented to members of the medical profession, the floors above being used by the hospital. The X-ray apparatus was owned by Dr. Nyberg, but it was set up in a portion of the premises used by the hospital. The doctor and his assistant were the only persons who operated the machine. However, defendant furnished the room and electric energy free, and the earnings from the machine were divided between the hospital and Dr. Nyberg. Any repairs upon the apparatus were paid for by Dr. Nyberg. Plaintiff had applied to Dr. Nyberg for treatment, was treated only by him, and was not admitted to the hospital as a patient. Finally, it was established that Dr. Nyberg was a stockholder and a director of the H Hospital, Incorporated.

The court first considered the question whether Dr. Nyberg's office of director would require the holding that he, in taking the pictures, was acting for the defendant, as its agent. It is generally true that negligent acts of a director, or of a stockholder of a corporation are not binding upon the corporation unless the director or stockholder was empowered by the corporation to represent it as its agent. The fact that earnings from the X-Ray Laboratory were divided does not establish that the doctor was acting either as the agent or servant of the corporation. Further, there was no evidence to show that the corporation could or did control the discretion, or services of the doctor, or his manner or methods of rendering service in connection with the X-ray machine. This element of control is one of the tests of the relation of master and servant, which relation was wanting under the evidence adduced at the trial.

It may be said that generally an X-ray technician is regarded by the courts as being in the same professional group as a doctor, and as one who exercises his independent judgment upon cases sent to him for treatment. Of course this would not be true where the technician is paid a stipulated salary by the hospital, and is required to devote his time to patients of the hospital.

Thus, upon the evidence presented, the court is compelled to the conclusion that Dr. Nyberg was acting independently when he caused the burns suffered by the plaintiff, and therefore, that the hospital is not liable. The decision is representative of the weight of authority, for it is clearly the rule that a corporation can act only through its officers or agents, and if it is to be held liable for the negligence of a person connected with the corporation, then it must be shown that such person was the agent, or servant of the corporation.

An interesting question is presented by the following cases: Is a municipal hospital, operated by a city as a non-profit institution, liable for the negligent acts of its servants? Another question flows immediately from the first: Is the city liable for the negligence of servants of a municipal hospital operated by it as a charitable institution?

City of McAllen v. Gartman et ux., 81 S. W. (2) 147 (1935), Court of Civil Appeals, Texas, was an action brought by W. T. Gartman and his wife against the City of McAllen and another. Judgment was rendered for the plaintiffs in the trial court for $7500, whereupon an appeal was taken by the City of McAllen and the Medical Protective Company to the Court of Civil Appeals of Texas, which resulted in a decision by the court reversing the judgment of the lower court. The Medical Protective Company was an indemnity company sued jointly with the City of McAllen.

The basis of this suit was the alleged negligence of a student nurse which resulted in personal injury to the wife of the plaintiff. Incidentally, the patient was a paying patient. The city defended upon the ground that the hospital operated by it was a chari-

table institution, not liable for the negligence of its employees or servants and upon the ground that the hospital was operated by the city in the performance of a governmental function.

It was shown that the charter of the city provided for the founding and operation of a hospital. The evidence further established the fact that the hospital was not operated for profit, but was maintained solely for the purpose of protecting and conserving the health of the public. Patients were of two classes: paying and non-paying, the latter class being admitted as charity cases upon a showing of inability to pay for the services required. It was established that the funds derived from pay patients were applied to costs of operation but that such funds were wholly inadequate, the deficit being paid up out of city funds. Finally, the hospital was shown to be exempt from the payment of state, county, city, school district or other taxes.

The Court of Civil Appeals, in a well-reasoned opinion, held that where a hospital is constructed and operated by a municipality for the purpose of conserving the public health, to which indigent patients are admitted without charge, any receipts from the paying patients being applied to the expenses of operation, such hospital is to be considered as purely a charitable institution, and consequently, it is not liable for injuries received by a paying patient, caused by the negligence of an employee of the hospital. Further, the maintenance of a public charitable hospital by a city was held to be a proper exercise of the powers of government given to the municipality. When in the exercise of powers purely governmental, the city is not to be held liable for the negligence of its employees.

We have had occasion previously to notice the application of this doctrine of the exercise of governmental powers. Nothing is better established in our jurisprudence than the non-liability of municipalities for negligence in the performance of powers and duties which are purely governmental in character. It has been given to the courts to distinguish between powers governmental and powers proprietary. In the exercise of proprietary powers a different rule obtains. There, if the municipality is negligent in the execution of such powers, it must respond in damages to the aggrieved party.

In City of Shawnee v. Roush, 101 Okla. 60, 223 Pac. 354 (1923), it was held that the city was liable to a patient for burns suffered by her when a nurse negligently administered an enema. This decision was based upon the ground that the operation of a municipal hospital was an exercise of the proprietary powers of a city, as distinguished from the exercise of its purely governmental powers, and that when a municipality, through its employees or servants, is guilty of negligence in the execution of proprietary powers, it is liable to respond in damages for such negligence. Here the Supreme Court of Oklahoma affirmed the following language of *Illinois Trust & Savings Bank* v. *Arkansas City,* 76 Fed. 271: "A city has two classes of powers—the one legislative, public, governmental, in the exercise of which it is a sovereignty and governs its people; the other, proprietary, quasi private, conferred upon it, not for the purpose of governing its people, but for the private advantage of the inhabitants of the city and of the city itself as a legal personality." The Supreme Court of Oklahoma went on to add: "and, if the power is substantially of the latter class (proprietary) the city cannot escape liability for the careful performance thereof merely because it may in some general way also relate to a function of the government."

In a later case, **City of Pawhuska v. Black,** 117 Okla. 108, 244 Pac. 1114 (1926), plaintiff Eva Black sued to recover damages for personal injury alleged to have been caused by reason of the negligence of the defendant city, its agents and employees. A verdict and judgment of $5,000 were had in the trial court, which judgment was affirmed by the Supreme Court of Oklahoma.

Plaintiff here had an operation for resection of a gangrenous intestine, which operation was successful. However, plaintiff alleged that she was allowed to drink water a few hours after the operation, and was served a meal a few days subsequent, both of which services caused her to become violently sick, that her physician found it necessary to reopen the incision, and to remove some food matter from the abdominal cavity. The plaintiff further alleged that as a result of this treatment the operation was not ultimately successful because she never fully recovered, being left in bad health as a result of the negligence of defendant's servants.

The city defended upon the grounds: (1) that the city in operating the hospital was exercising a governmental function, (2) that the hospital was a charitable institution, (3) that the plaintiff was guilty of contributory negligence. In answer to these contentions the court cited *City of Shawnee* v. *Roush, supra,* holding that in the operation of a public hospital a city must be deemed to be exercising its private, proprietary powers, and if in the exercise of such powers it, or its servants were guilty of negligence, then it would be liable for the injury caused by such negligence.

The court also pointed out that it did not think that the judgment rendered was excessive, it being

the rule that a judgment rendered by a court of law will not be disturbed on appeal if there is any competent evidence reasonably tending to support it.

Thus we have two decisions holding that the operation of a hospital is a proprietary function of the municipality. There is a third decision upon this question rendered by the Supreme Court of Oklahoma, *Spaur et al.* v. *City of Pawhuska,* 43 Pac.(2) 408 (1935), which confuses the law in that State. In the case last cited it was held that the operation of a motor truck by the city for the purpose of cleaning streets and sewers was the discharge of a governmental function, *since the city was acting to preserve the public health.* It is submitted that if the cleaning of streets and sewers is a governmental function, based upon the protection of public health, then how much more so is the operation of a municipal hospital a governmental function, being based as it is upon the conservation of public health. Logically, the operation of a municipal hospital must fall within the classification of governmental functions, providing there is authority in the city charter for the establishment of such an institution. The result thus compelled is that in no event would the city or the hospital be held liable for the negligence of its employees or servants in the performance of their duties.

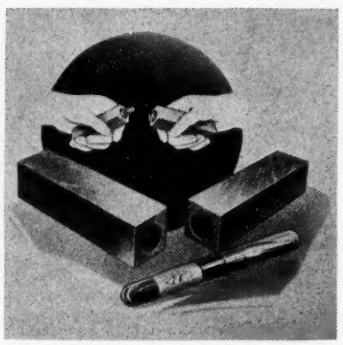
Another jurisdiction noticed (that of Minnesota), has adopted the view that in operating a general hospital a city is to be regarded as in the exercise of its proprietary powers, and so, liable for injuries to patients caused by the negligence of itself or its servants and employees. In **Borwege v. City of Owatonna,** 190 Minn. 394, 251 N. W. 915 (1933), the plaintiff sought to recover damages for burns caused by contact with two hot water bottles after an operation for appendicitis. Plaintiff had judgment for $600 and on appeal this judgment was affirmed.

The Supreme Court of Minnesota pointed out that since negligence was established, the question was whether the city in operating the hospital was engaged in the performance of a governmental or of a proprietary function. In answering this question the court says: "In the operation of the hospital under the circumstances here, the city was exercising its corporate, proprietary powers. The hospital was not such a one the operation of which would properly come within the governmental function for the protection of health and suppression of disease. It was a general hospital operated for the private advantage and convenience of the inhabitants of the city." The court further says: "When a city engages in activities which are of a nature ordinarily engaged in by private persons and which subject private persons to liability for negligence, the city is likewise liable for negligence."

It is submitted that the test pronounced by the Minnesota court is questionable. The test should not be whether the city is engaged in activities which private persons may or may not undertake, but the test should be whether the city is engaged in the rendition of services designed to protect the public health. That the operation by a city of a general hospital represents the discharge of a public health function is not open to question. It follows that such operation should be classed as a governmental and not a proprietary function.

Catgut Tube Breaker

A new gadget easy to make, and useful, is a catgut tube-breaker illustrated below. The usual method of breaking tubes in a piece of gauze is inconvenient and may result in injury. It is accompanied with waste of gauze, damage to towels, and frequently tears in rubber gloves.



A graduate nurse in Denver devised this simple aid, which consists of two blocks of wood, each block drilled in the center so as to accommodate one-half of the tube, the blocks meeting at the file mark on the tube. There should be a small hole bored through the side or end of the tube to serve as a vent and release any air trapped.

The advantages are:

1. Rapid breaking of tubes.
2. Saves gloves and gauze, or towels.
3. No danger of cutting hands.
4. Keeps pieces of glass in one place.
5. Economical.
6. Easy to make.

Women's Building at Harlem Hospital Opened

The Women's Building at Harlem Hospital, New York City, was opened to the public on January 2, increasing the total capacity of the hospital from 325 beds to 677 beds.

QUALIFICATIONS FOR PHYSICAL THERAPY TECHNICIANS

THE AMERICAN COLLEGE OF SURGEONS in their report on hospital standardization for 1934 state that "hospitals carrying on physical therapy should have a well organized department with adequate, trained personnel under competent medical supervision." The selection of the trained technician is most important for the Council of Physical Therapy of the American Medical Association states that ninety per cent of the necessary physical therapy in a general hospital can be accomplished by exercises, massage, muscle training and posture work. This requires no equipment but does require the services of a specially trained technician.

The Council of Physical Therapy published in 1930 their opinion on the education of physical therapy technicians. This year the Council on Medical Education of the American Medical Association will finish their inspection of schools for physical therapy technicians and will publish a list of approved schools. Previous to this the American Physiotherapy Association, a national association of physical therapy technicians, published a list of these approved schools. This national organization assumed the task of passing on the qualifications of physical therapy technicians. Their requirements for admission to their society were, graduation from a recognized school of nursing or a school of physical education, and in addition, graduation from a recognized school for physical therapy technicians. This association's secretary, Miss Jefferson Brown, Adelaide Tichenor Clinic, Long Beach, California, will cooperate with hospitals in securing adequately trained physical therapy technicians.

Since physical therapy is a definite part of medicine, it was believed that the training and qualifications of physical therapy technicians should be judged by the medical profession. Therefore the American Congress of Physical Therapy, national organization of physicians interested in physical therapy, aided by the Council on Medical Education of the American Medical Association, have recently established the "American Registry of Physical Therapy Technicians."

Applications for Registration

Upon request, the registrar will furnish blanks on which formal applications are made for certification, with data to be filled in giving information as to the applicant's preliminary education, technical education, experience in physical therapy, training and experience in related fields, and references from two licensed physicians.

Eligibility for Certification

In the registry there are two classes.

A. Physical Therapy Technicians.

1. Applicants who were graduated from an approved school of physical therapy. The Board shall accept as approved those schools passed by the Council on Medical Education and Hospitals of the American Medical Association.

2. Individuals who have worked in Physical Therapy for seven years or more in institutions or organizations acceptable to the Board of Registry. Applicants shall have had a high school education and shall be required to pass a written, oral and a practical examination given by the regional board. Registration in this group shall not be permitted after January 1, 1938.

B. Junior Physical Therapy Technicians.

Applicants who have completed high school education and have had four years of experience in physical therapy under the supervision of qualified physicians. These applicants shall be required to pass written, oral and practical examinations of a more limited scope. Registrations in this group shall not be permitted after January 1, 1938.

After January 1, 1938, applicants for junior physical therapy technicians shall be required to have the following qualifications:

1. Graduation from an accredited school of nursing or physical education which meets the requirements set by law in the individual state, and in addition have had, not less than one year of training and experience in physical therapy, under qualified physicians.

2. Completion of 60 university credit hours, including 26 hours of physics, chemistry, zoology, biology, and in addition not less than one year of training and experience in physical therapy under qualified physicians.

In view of the newness of the Registry it is recommended that during 1935 and 1936 the technician in charge of a physical therapy department should be either a member of the American Physiotherapy Association or a registered physical therapy technician of the American Registry of Physical Therapy Technicians.

After January 1, 1937, it is recommended that all physical therapy technicians in approved hospitals have a certificate from the American Registry of Physical Therapy Technicians. This registry now has a list of registered physical therapy technicians and junior physical therapy technicians. The secretary, Miss Marion Smith, 30 North Michigan Avenue, Chicago, Illinois, will cooperate with hospitals in securing properly qualified technicians.

In addition to adequate physical therapy training the other important factors in the selection of these technicians are personality, moral integrity and a knowledge of hospital ethics and routine.

QUALIFICATIONS FOR X-RAY TECHNICIANS

THE X-RAY TECHNICIAN, who is entrusted with a type of work which involves great responsibility, is an important aid to the radiologist. His competency in the technical phase of radiography, his personality and his integrity determine the eligibility of the applicant for a position in an ethical X-ray department.

The Radiological Society of North America, recognizing the need for the encouragement and development of skilled X-ray technicians to the end that they produce better technical work and also reduce lay interference in the practice of radiology, operates under its auspices the American Registry of Radiological Technicians. The Registry has been in operation since 1922 and up to this date there have been 1,165 technicians registered.

Applicants for registration shall be 21 years old, male or female. They shall have the equivalent of a complete high school education. They shall have served at least two years as X-ray technicians under the direct supervision of a radiologist or a duly licensed Doctor of Medicine. This two year period may include the one year course for technicians described below. The examination which consists of written and practical tests, is given by a local examiner appointed by the Board of the American Registry of Radiological Technicians. The examinations are graded by the Registry Board and successful applicants with a minimum passing grade of 75 receive a certificate. This certificate is subject to renewal on the first of each calendar year. All applicants must sign a pledge before being admitted to the examination which reads as follows:

In consideration of the granting of a certificate from the American Registry of Radiological Technicians, the undersigned agrees to:

I. Perform the work and duties of an X-ray technician only:

(1) Strictly in accordance with the rules and regulations of the Registry.

(2) Under the direction and supervision of a medical radiologist.

II. Never to give oral or written opinions or diagnoses on X-ray shadows.

III. Never to engage in X-ray work independently whether in private office, hospital, or other institutional department.

I further agree to apply for a renewal of this certificate each succeeding year unless I shall have become ineligible for registration.

Since the proper training of an X-ray technician is of utmost importance a great deal of thought has been given to this problem by various professional societies. After due consideration the Registry Board established the following minimum requirements for training courses:

1. The minimum entrance requirements are a complete high school education; minimum age 19 years. It is preferable to take applicants with a college education or a graduate nurses' certificate.

2. A qualified radiologist must be in charge of the department where the course is given.

3. The course must extend over one year of full time service.

4. The work is to consist of lectures, practical work in the department, and home study.

5. A comprehensive written and oral examination is to be given at the end of the course covering the theory and practice of radiological technic. A certificate should be issued to the successful applicant.

Any radiologist who offers a course of training for X-ray technicians in his private office, or any school or institution where such courses are given, may be investigated by the Board; and the school giving satisfactory evidence of standards shall be placed upon an accredited list of the Board.

There is no doubt that the formal recognition of the experienced X-ray technician as a skilled worker will strengthen the morale of those engaged in this special work. The certificate of registration given by the American Registry of Radiological Technicians is recognition of such qualified training. The physician radiologist (roentgenologist) who engages the services of only registered X-ray technicians or who has his technicians registered can feel that he is acting in the best interests of his practice, his referring doctors, and patients he serves. Therefore, all individuals who are engaged in this vocation who can qualify as required by this registry should and are invited to apply for registration.

New University of Illinois Medical Building

Contracts for the new nine-story building to house the medical and dental laboratories of the University of Illinois, at Polk and Wood streets, have been let to the J. W. Snyder Company, of Chicago.

The building will extend 180 feet on Polk street, and 143 feet on Wood street, and will be of Gothic architecture, the same as that of the Research and Educational Hospitals, the Medical Laboratory and other units of the school group.

The main part will be nine stories high, with a tower fifteen stories high in the center of that portion extending along Wood street. The new structure is being built with a federal grant of $1,220,000, 30 per cent of which is an outright gift and the remaining 70 per cent a loan.

England—Periodic Payment for Hospital Care

GRAHAM L. DAVIS

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HOSPITALS should take every opportunity for community service, particularly rural hospitals. The development of group payment for hospital care, properly instituted, constitutes a definite community service to the community and to each individual in it.

The prevailing opinion in America is that it is much more difficult to organize group purchase of hospital care in the smaller towns and villages than in urban centers of population. British experience is to the contrary.

I am particularly interested in this phase of the problem, because North Carolina is the first state to organize group payment for hospital care on a state-wide basis. North Carolina is largely a rural state and its hospitals are small. Seventy of its 110 general hospitals have less than 50 beds and the average general hospital is about one-half the size of the average general hospital in the United States.

Last May I went to Europe with Dr. I. H. Manning, President of our Hospital Saving Association, to make a study in particular of British hospital contributary funds. We were named by the American Hospital Association as delegates to the annual conference of the British Hospitals' Association at Leamington Spa. At the suggestion of Sydney Lamb, who you will recall talked on this Association last year about British hospital contributory funds, we visited Rugby the afternoon set aside on the program for visits to hospitals in that particular area. The bus set us down in front of St. Cross Hospital about 2:30. Captain Cockburn, its administrator, and reporters from the *Rugby Advertiser* and *Rugby Observer* met us. These reporters indicated a keen interest in the visitors from America. This indicated to us also a hospital administrator who knew his publicity.

England is much more densely populated than our country and the population served by St. Cross Hospital is approximately 42,000 within a radius of six or seven miles. The largest industry is the British Thomson-Houston Company, General Electric subsidiary. Its employees are enrolled one hundred per cent in the group payment plan which was started by Captain Cockburn about eight years ago. Of the 14,000 contributors, 10,500 pay their contributions through the payrolls of 66 firms and the employer in each instance adds one-third. The other 3,500 contributors are itinerant workers, such as carpenters, painters, domestic servants, farmers, and employees in small shops. Their contributions are collected by committees organized in each ward in Rugby and village committees organized in 40 surrounding villages. Some 120 voluntary collectors, who serve without compensation other than the satisfaction that comes from having helped in a worthy cause, keep registers of contributors and their contributions as made each week, and turn the money over to the hospital. Captain Cockburn has 97 per cent of the eligible population enrolled in his group payment plan, but he told us that in practically every one of the 40 rural villages the eligible population was enrolled 100 per cent.

We found the same thing at Oxford, where the Radcliffe Infirmary, teaching hospital for the world famous Oxford University Medical School, serves a population of some 250,000, largely rural. There are six or seven small hospitals located within ten or fifteen miles of Oxford more or less linked with the Radcliffe Infirmary. About 85 per cent of the eligible population is enrolled, but in the rural areas it is practically 100 per cent.

In London, for example, where the force of public opinion is not so strong, the Hospital Saving Association, while it has 1,500,000 members, has only one-third of the eligible population enrolled. The same is true of Manchester, center of the Lancashire textile industry, but in the cotton mill towns scattered throughout Lancashire, with their own local hospitals, the population in and around these villages is enrolled in the hospital contributory fund practically one hundred per cent.

In North Carolina we propose to enroll both our industrial population and our rural farming population, using British methods, and we believe it can be done.

To my way of thinking, the small general hospital, which is usually located in a comparatively small town, can render no finer service to its community than by organizing group payment for hospital care, a method by which the average man in the low income group can pay his hospital bill without hardship and at the same time preserve his self respect, which is the most important factor involved.

The Minnesota Law as Applies for Payment of Indigents

INDEX: Counties—Hospitals—Admission to—Cost of treatment to be borne by county —Residence rather than settlement controls as to right of admission to—Chapter 359, Laws of 1935.

IN REPLY to an inquiry, the Honorable Harry H. Peterson, Attorney General for the State of Minnesota, interpreted Chapter 359 of the Laws of 1935 as follows:

We believe that the legislature enacted said Chapter 359, Laws of 1935, for the purpose of supplementing Sections 4577 to 4587, Mason Statutes of 1927, relating to the care and treatment of indigent persons in the Minnesota General Hospital; that is, said Chapter 359 seems to have been enacted for the purpose of giving counties the alternative of sending such indigent persons in need of hospitalization or treatment to hospitals in the county or other hospitals in the state rather than to the Minnesota General Hospital. It will be noted that the provisions relating to eligibility as provided for in said Chapter 359 are very similar to those governing admission to the Minnesota General Hospital. It is probable that the legislature at the time of the enactment of said chapter had in mind the congested conditions existing in the Minnesota General Hospital.

QUERIES

1. ***"Does this act relieve the townships and villages (our county operating under the township system) of the financial responsibility of taking care of cases for hospitalization and must the county pay for said hospitalization?"***
2. ***"Must the county take care of these cases when properly notified or may they refuse?"***
3. ***"If they refuse, who is responsible for the hospitalization?"***

This office has heretofore held that the so-called poor relief statutes do not govern or control the right of admission or non-admission to the Minnesota General Hospital; that is, a person desirous of receiving treatment at the Minnesota General Hospital may make an application to the county of his residence, although such applicant may have a settlement for poor relief purposes elsewhere, and that all expenses in connection with such treatment at such hospital are legal charges against the county of such applicant's residence, regardless of such person's settlement for poor relief purposes.

We believe that the same rules that govern with reference to the right of admission to the Minnesota General Hospital are also applicable with reference to the right of a person to be admitted to a hospital pursuant to the provisions of Chapter 359, Laws of 1935.

We believe that a person may be entitled to the hospitalization and treatment provided for in said Chapter 359 who would not be entitled to poor relief in the strict sense of the term "poor relief."

It is true that Section 1 of said Chapter 359 refers to "indigent residents of such county." However, it will be noted that Section 2 of said Chapter 359 provides that the county board shall make a careful investigation of each case submitted to it, and that it is the duty of any public official of any county, city, village or town of the residence of the person sought to be treated to supply the county board on request therefor all information within his knowledge, etc. It is also provided in said section that if after such investigation the county board shall be satisfied that the person, on whose behalf the application is made, is not financially able to provide himself with such care and treatment, the county board shall direct the county physician or some other physician to make an examination of such person, and that if after the filing of the report of such examination and after a full investigation of the application, the county board is satisfied that the case is one which could be remedied by hospital treatment and that such afflicted person is financially unable to secure or provide the same for himself, the county board may grant or approve such application; and that upon the approving and granting of such application the chairman of the county board shall arrange for the hospitalization of such afflicted person.

Said section further provides that the county board shall reject any application if it finds that the facts do not merit the expenditure of public money for the relief of such afflicted person.

It seems manifest from the above referred to statutory provisions that each individual case must be determined and passed upon by the county board after taking into consideration all the facts and circumstances relating to such cases. We believe, therefore, that a person may be entitled to hospitalization under said Chapter 359 even though such person may

not be entitled to poor relief from the county or municipality in which he has a "legal settlement." We do not believe that the term "legal residence," as used in said Chapter 359, should be confused with "legal settlement" under the poor relief statutes. Section 3 of said Chapter 359 provides in part:

> "The cost of the hospitalization of indigent persons under the provisions of this act shall be paid by the *county of the legal residence* of such indigent persons at such times as may be provided for in such contract."

Specifically answering your first inquiry it is our opinion that the financial responsibility of taking care of hospitalization cases arising under said act belongs to the county whether the county has the town or county system of poor relief.

Answering your second inquiry we believe it is the duty of the county board to take care of legitimate cases arising under said act, and that said duty in this connection is the same as under the Minnesota General Hospital Act hereinabove referred to. The board, however, is vested with considerable discretion in determining which cases are entitled to hospitalization. It is not likely that a court would interfere unless the board acted capriciously, arbitrarily or oppressively. We may further add, however, that the financial ability of the relatives of an applicant to care for him is not a bar to his treatment at the hospital except as specifically limited by Section 2 of the act.

As hereinabove indicated, in a proper case it is the duty of the county board to provide for hospitalization either at the Minnesota General Hospital or at another hospital to be selected by the board pursuant to said Chapter 359. It is presumed that the public officers will do their duty. For this reason we do not deem it necessary to answer your third question.

Cost of Anesthesia Service

The following figures are for the actual cost of anesthetics, and the total cost of anesthesia service. The figures for the total cost of anesthesia service are only approximate, as they were arrived at by using what I should consider an average salary:

Cost of Ether Anesthesia

ADULTS (180 to 240 c.c. per hour average)
(200 c.c. using 5-lb. tins) ..... $ .14 per hour
with nitrous oxide plus oxygen induction, using D cylinders
nitrous oxide ..... .09
oxygen ..... .03 .12
.26 first hr.
Each additional hour ..... .14

CHILDREN (120 to 180 c.c., average 150 c.c.) . .09 per hr.
with nitrous oxide plus oxygen induction, using D cylinder
nitrous oxide ..... .09
oxygen ..... .03 .12
.21 first hr.
Each additional hour ..... .09

GAS-OXYGEN
Nitrous oxide plus oxygen ..... .32 per hr.
Ethylene plus oxygen ..... .34 per hr.

(The methods used in the gas-oxygen anesthetics from which these figures were obtained included both total and partial rebreathing.)

If ether is added to the gas mixture, the cost would be increased at the rate of about 2 cents per each 30 c.c. used; again figuring on the use of 5-pound containers. Avertin costs about 15 cents per each c.c. used; evipal, 50 cents per gram, duration of anesthesia about 20 minutes.

Cost of Anesthetist's Services

On the basis of a salary of $125.00 per month plus $45.00 for maintenance, total $170.00 per month, eight hours per day, 26 days per month, the cost per hour is 81 cents, but this does not allow for the time not engaged in the actual giving of anesthetics. In order to make the anesthetics administered completely cover the salary, we will divide the salary into anesthetic hours. Using the same salary figure, $170.00 per month and taking as an average one hundred anesthetic hours per anesthetist per month, the cost per hour would be $1.70.

Cost of Incidentals

Gauze, towels, replacing worn-out parts, replacing equipment, repairs, et cetera .19 per hour

Actual Cost of Anesthesia Service

Including:

1. Cost of Anesthetist's Services
2. Incidentals
3. Cost of Anesthetic Materials

ETHER for adults, with gas induction ..... $2.14 first hour
Each additional hour 2.02
ETHER for children, with gas induction ..... 2.10 first hour
Each additional hour 1.98
GAS-OXYGEN
Nitrous oxide plus oxygen ..... 2.21 per hour
Ethylene plus oxygen ..... 2.23 per hour

Any ether added would increase cost.

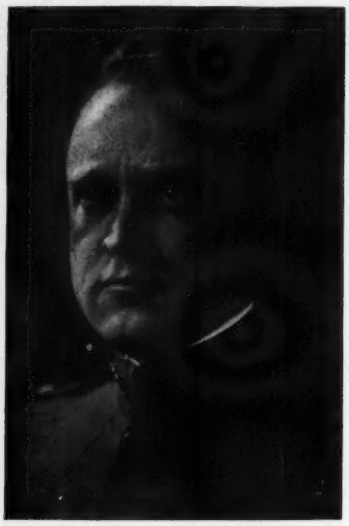
Aside from the initial cost of gas apparatus, and the expenditure for upkeep, it is apparent from the foregoing figures that there is very little difference in the cost of ether and gas anesthesia. Therefore gas anesthesia should not be denied patients because of the supposed difference in cost.

Miriam G. Shupp, Anesthetist
Strong Memorial Hospital, Rochester, N. Y.

Obituaries

DR. WILEY EGAN WOODBURY

Dr. Wiley Egan Woodbury, one of the most prominent of our hospital administrators, and a hospital consultant of international reputation, died in St. Joseph's Hospital, Phoenix, Arizona, on January 6.



Dr. Woodbury was born in Port Huron, Michigan, in 1880, and graduated from the Detroit Medical College in 1906. He was on the resident house staff at the Grace Hospital, Detroit, from 1906-7; assistant medical superintendent of the Iona State Hospital from 1908-11, and was superintendent of the Government Hospital in Manila, P. I., from 1911 to 1913.

During his service in the Philippines he was consultant to the Government on Hospital Construction and Organization, prepared the plans for the large Free Dispensary, and assisted in the completion of the Philippine General Hospital. He assisted in the organization of the Leper Colony, and was Lecturer on Hospital Construction and Organization at the Government University, Manila, P. I. During this same period he was consultant on Hospital Construction and Administration to the Government of Siam, to the Health authorities of the Province of Queensland, Australia, and the City Hospital of Antwerp, Belgium. Dr. Woodbury also was consultant in the organization and administration of the Charity Hospital, Hong Kong, China, and the Harvard Medical School Hospital, Shanghai, China; he made a close study of the hospital systems and methods of sanitary administration of China, Malay Strait Settlements, India, Island of Ceylon, Egypt, Arabia, and more particularly of the large German hospitals.

He returned to the United States in 1915 and was retained by a group of New York business men to reorganize the Hahnemann Hospital, New York City, and prepared tentative plans for the erection of a new building. He entered the Army during the World War as Major, Medical Corps, and Assistant to Commanding Officer, Base Hospital, Camp Devens, Mass.; served in the same capacity at Camp Upton, and was appointed commanding officer of the Base Hospital in July, 1918. He was promoted to Lieutenant Colonel on September 25, 1918, and was discharged from service on February 28, 1919; was later promoted to the rank of Colonel in Reserve Corps, which rank he held at the time of his death.

Dr. Woodbury had been the director of the Fifth Avenue Hospital until last fall when that institution merged with the Flower Hospital. He took a large part in the planning of the Fifth Avenue Hospital, and had been for many years interested in the idea of a "wardless" hospital where rich and poor alike might have private rooms.

He was a member of the American Hospital Association since 1911, had active part in the work of the Association, and was a frequent contributor to hospital literature.

The Hospital field, in the passing of Dr. Woodbury, has lost an able administrator and a wise consultant whose contributions to the advancement of hospitals has left its impress on more than twenty hospitals, to the planning and construction of which he has contributed.

Dr. Woodbury was survived by his wife and a daughter.

DR. NATHAN PORTER COLWELL

The hospital field has suffered a great loss in the death of Dr. Nathan Porter Colwell, who for many years, as secretary of the Council on Medical Education and Hospitals of the American Medical Association, was interested in hospitals and particularly in the educational functions of our institutions since 1903, and up to within the last two or three years, when he retired because of failing health. He was always generous and sympathetic in his relationships with our hospitals; he made a close study of the development of the medical education function of our institutions.

Born May 25, 1870. Died January 6, 1936.

His chief concern was providing, through our executives, the proper education and training for interns and residents.

In 1901 the Journal of the American Medical Association published its first Educational Number, and in 1905 the Council on Medical Education and Hospitals was formed with Dr. Colwell as its first secretary. During his tenure of office each of the annual reports on medical education in hospitals, which is published by the Council on Medical Education and Hospitals, was drawn up under his personal supervision.

His contribution to the establishment and maintaining of the standards for hospitals throughout the United States was distinctive, and to him we must assign a very large portion of the credit for the impressive progress which our institutions have made in bringing to the patient bedside the best of medical service.

For more than twenty-five years Dr. Colwell has collaborated with the United States Bureau of Education. During the World War he rendered a distinguished service in the office of the Surgeon-General of the Army. Since his retirement as Secretary of the Council on Medical Education and Hospitals, he has been engaged in preparing a history of medical education. He was particularly cooperative of the aims and purposes of the American Hospital Association and other hospital organizations. Quiet and unassuming, but particularly capable in the phase of work in which he was engaged, and to which he devoted practically all of his professional life, the hospital field is indebted to his efforts and to his work for much of the advancement which they have made in the past quarter of a century.

Dr. William L. Wallace, founder of the Crouse-Irving Hospital, Syracuse, N. Y., died recently.

Dr. Charles F. Kuhn, director of the Warren Avenue Diagnostic Hospital, Detroit, passed away recently following a heart attack.

Sister Margaret, superintendent of St. Vincent's Hospital, Bridgeport, Conn., died recently.

Mt. Morris Hospital to Open

The new 250 bed tuberculosis hospital at Mount Morris, New York, was recently opened. Everything included in the new institution is of the latest type.

Coming Meetings

CLEVELAND, OHIO

American Hospital Association, Sept. 28-Oct. 2
American Protestant Hospital Association, Sept. 26, 27, 28
American College of Hospital Administrators, Sept. 26, 27, 28
National Association of Nurse Anesthetists, Sept. 29, 30, Oct. 1
American Occupational Therapy Association, Sept. 29, 30, Oct. 1
Children's Hospital Association, Sept. 30, Oct. 1

Council on Medical Education and Hospitals, American Medical Association, Chicago, Feb. 17-18.

American Hospital Association Conference of State and Province Presidents, Secretaries, and Chairmen of State Legislative Committees, Chicago, February 17-18.

New England Hospital Association, Boston, February 27-29.

Texas Hospital Association, Dallas, March 6-7.

Ohio Hospital Association, Columbus, April 14-16.

Joint Conference, North Carolina and Virginia Hospital Assns., Old Point Comfort, Va., April 16-17.

Association of California Hospitals, San Francisco, April 20-23.

Association of Western Hospitals, San Francisco, April 20-23.

Alabama Hospital Association, Montgomery, April 21.

Hospital Association of Pennsylvania, Pittsburgh, April 22-24.

Colorado Hospital Association, Denver, April 28-29.

Iowa Hospital Association, Des Moines, April 27-28.

Mississippi Hospital Association, Greenville, May 4.

Joint Conference, Illinois, Indiana, and Wisconsin Hospital Associations, Chicago, May 6-8.

American Medical Association, Kansas City, May 11-15.

Michigan Hospital Association, Grand Rapids, Second Week of May.

Minnesota Hospital Association, S. Paul, May 14-15.

Hospital Association of the State of New York, Buffalo, May 21-22.

New Jersey Hospital Association, Atlantic City, June 4-6.

Manitoba Hospital Association, June 25-26.

Connecticut Hospital Association, June.

Hospital Association of West Virginia, White Sulphur Springs, September or October.

British Columbia Hospital Association, Victoria, September or October.

American Public Health Association, New Orleans, La., October.

American Dietetic Association, Boston, October 11-16.

American Dietetic Association, Boston, Oct. 11-16.

Ontario Hospital Association, Toronto, Oct. 19-23.

Kansas Hospital Association, McPherson, Oct. 31.

American College of Surgeons, Philadelphia, October 19-23.

News Notes

Sister Frances de Chantal is superintendent of the Good Samaritan Hospital, Dayton, Ohio, succeeding the late Sister Mary Daniels.

Miss Wavie Stiles has been appointed executive secretary of the Iowa State Board of Nurse Examiners, Des Moines, Iowa, succeeding Maude E. Sutton.

Dr. L. A. LaBarre has succeeded Dr. E. E. Shifferstine as chief surgeon of the Coaldale State Hospital, Coaldale, Pa. Dr. Shifferstine resigned after twenty-five years of service.

J. G. Price has resigned as superintendent of the West Oklahoma Baptist Hospital, Clinton, Okla.

James S. North succeeds the late Dr. T. E. Reeks as superintendent of the New Britain Hospital, New Britain, Conn.

Mary J. Hutchinson has been appointed superintendent and director of nursing at the Huntington Hospital, Huntington, Long Island, succeeding Agnes Martin, who resigned to be married.

Beryl Hoover has been appointed superintendent of the Jasper County Hospital, Rensselaer, Ind., succeeding Martha C. Oosten, who resigned to be married.

Dr. R. L. Leak, superintendent of the Connecticut State Hospital, Middletown, was engaged very largely with the planning and organization of the Fairfield State Hospital at Newton, and was its superintendent during the period of construction and in 1935. When the Fairfield State Hospital was ready to receive patients, Dr. Leak resigned the superintendency of that institution and confined his work to the superintendency of the Connecticut State Hospital.

LeRoi A. Ayer, formerly assistant superintendent of the Cooper Hospital, Camden, N. J., has been appointed superintendent of that institution, effective January 6.

S. K. Hummel, assistant superintendent of the Augustana Hospital, has been appointed superintendent of the Silver Cross Hospital, Joliet, Illinois, to succeed Mr. Ralph M. Hueston, who accepted the superintendency of the Hurley Hospital, Flint, Michigan.

Dr. James L. Smith, formerly superintendent of the Illinois Eye, Ear, Nose & Throat Hospital, has been appointed superintendent of the John C. Proctor Hospital, Peoria, Illinois.

Dr. H. B. Gratiot, who has for many years been president of the staff of the Finley Hospital, Dubuque, Iowa, and a member of the American Hospital Association since 1911, died on January 13.

Eva M. Wallace has resigned as superintendent of the Wichita Falls Clinic-Hospital, Wichita Falls, Texas, and is now temporarily affiliated with the Methodist Hospital at Fort Worth, Texas.

Sophia Peters, of Mt. Pleasant, was elected as superintendent of the Palo Alto County Hospital, Palo Alto, Iowa, to succeed Emma Lorenzen, who resigned.

New Jersey Statistics

Emil Frankel, director of the Department of Institutions and Agencies at Trenton, N. J., reports that the average per capita cost for fifty-eight hospitals in that state was as follows:

August	$4.62
September	4.73
October	4.71

The cost per capita per day for the fifty-eight hospitals shows the following distribution:

Cost per capita per day	Number of Hospitals Reporting
Under $3.50	7
$3.50 to $3.99	6
$4.00 to $4.49	8
$4.50 to $4.99	11
$5.00 to $5.49	9
$5.50 to $5.99	4
$6.00 and over	11

During the month of October, 1935, fifty-six hospitals reported $558,913 receipts from patients, and $1,040,361 operating expenditures. The amount of receipts from patients covered fifty-four per cent of the current operating expenditures.

A Therapeutic Pool for James Whitcomb Riley Hospital

A therapeutic pool was recently completed at the James Whitcomb Riley Memorial Hospital with funds provided by the Federal Emergency Relief Administration. The pool is dedicated to the service of the crippled children of Indiana.

M. Burneice Larson,
Director

YOU NEEDN'T WAIT ALWAYS FOR THE POT OF GOLD AT RAINBOW'S END

It's Waiting for You

They say, those who know, that hospital people, even the smartest and best, sometimes tire and grow grey in that "interminable" wait for success.

Yet, success and its rewards, its excitement and material things, its rainbows and its pot of gold—may be just around the corner.

If you haven't found your niche in life, if you aren't at rainbow's end, we'll help you get there.

Men and institutions come to us hunting for you, and they offer salaries and open locations and OPPORTUNITIES. Hospitals, great factories, groups of physicians, new towns, sections of old cities, hotels, ships that go to sea, institutions—these ask us to find physicians, graduate nurses, technicians, dietitians—every type of hospital worker.

If you aren't at rainbow's end, write and tell us all about yourself—tell us what you'd like and we'll surely help you find it.

Among the well-trained and skillful candidates whom we can recommend to you are:

Hospital Administrators
Directors of Nurses
Assistants
Instructors
Supervisors
Anaesthetists
Staff Nurses
Social Workers
Laboratory and Research Workers
Physiotherapists
Occupational Therapists
Dietitians
Medical Secretaries
Resident Physicians
Physicians who are qualified to head the various departments in hospitals, group clinics, teaching, public health and industrial organizations.

The Medical Bureau

Top Floor, Pittsfield Building — Chicago, Illinois

ALFRED P. SLOANE, JR., made a speech before the Poor Richard Club in Philadelphia not long ago. He was talking to advertising men. He advocated a broader study of the means that advertisers use to secure consumer acceptance—new ways and new methods, in keeping with the progress made in other industries. Instead of depending upon printers' ink alone, he thought, they should broaden their activities, using more research.

It struck us forcibly when we thought of the opportunities for manufacturers in the hospital field. There is need here for modern research. It is true that some manufacturers have done wonderful things for the equipment of hospitals. On the other hand, hospital consultants and hospital architects, superintendents and members of the staff have contributed a large intelligence to help manufacturers to improve and to adapt products for hospital use. This sort of study is not organized.

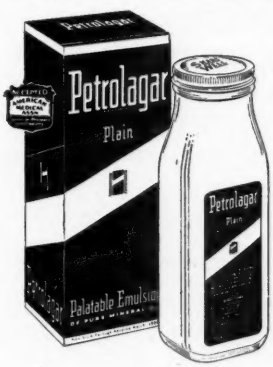
The American Hospital Association is developing a Research Department which one day will be organized so that it will pave the way for manufacturers to build their products to fill the exact needs of all hospital departments satisfactorily and thereby produce the highest efficiency. Manufacturers will find, as Mr. Sloane says, that there are ways and means added to the written word of advertising which can maintain a growing market for products in the hospitals.

Supposing a well-organized research department were to uncover new short cuts to more efficient service in the different divisions of the hospital. And suppose the results of that research were turned over to several manufacturers in an industry. And suppose further that they went to work on that data with the true facts actually before them. Isn't it obvious that the field would be served better and the manufacturers assured of a market with sales cost cut to a new minimum?

The American Hospital Association has served manufacturers in many instances and is doing so every day. Advice is given on introducing new products. Many a manufacturer has been saved thousands of dollars which would have been spent experimenting and learning how to serve this market. We are inclined to suspect that if Mr. Sloane's prophetic vision were fulfilled, there would be a new tone to advertising copy and to the salesman's methods. The time it takes to gain consumer acceptance on a large scale would be materially shortened. Such a Research Department is no idle dream.

Funds accruing to the Association through the development of ***HOSPITALS*** will be applied to research and the results of that research will be available to all our manufacturers.

Physicians who have visited the laboratories in which Petrolagar is made have often expressed surprise at the unusual precautions taken to assure accuracy in the manufacture of this most palatable mineral oil emulsion. Here, in the home of Petrolagar, is to be found every practical scientific instrument obtainable for the purpose of testing and retesting raw materials and the finished product • Most important, however, in the preparation of this fine pharmaceutical, are the human minds and hands that direct and use the instruments provided in the Petrolagar control laboratories. Minds trained in the best universities and hands skilled in the techniques essential to accomplishment—enable us to cooperate with physicians in the successful treatment of constipation.



Petrolagar Laboratories, Inc. ★ ★ ★ Chicago

Petrolagar is a mechanical emulsion of pure mineral oil (65% by volume) and agar-agar, prepared in Five Types for the treatment of constipation.

Among the Associations

State and Province Association News

American College of Hospital Administrators

ROLL CALL

The Committee on Training Hospital Administrators, composed of Dr. Malcolm T. MacEachern, *Chairman,* Father Alphonse M. Schwitalla, Dr. B. W. Black, Dr. A. K. Haywood, Dr. A. C. Bachmeyer, Robert Jolly, and Boris Fingerhood, will meet at the Palmer House, Chicago, on Monday, February 17, at 9:30 a. m., at which time it is hoped they will complete their report. The hospital field is anxiously awaiting the final report of this committee as is indicated by the many inquiries received at the College headquarters. It is the intention of the Committee to outline complete curricula that may be adopted by Colleges approved by the American College of Hospital Administrators for the purposes—first, a full term course leading to a College degree; second, a refresher course of possibly three or four weeks' duration to be offered by the same colleges giving the full term course and making it possible for those active in hospital administration to improve their administrative ability. The refresher course will be so outlined that there will be no duplication of study for the administrator who wishes to continue his study annually.

Dr. A. C. Bachmeyer, Chairman of the Committee on Future Program and Policy, is preparing a report of his committee to present to the Executive Committee at their meeting on February 17, at the Palmer House, Chicago. While the definite recommendations of this committee are not completed, it should be announced that changes in the Constitution and By-Laws will be proposed, broadening the membership requirements with the possible addition of a Junior Membership and clearly defining requirements for each form of membership, giving special consideration to the value of the College to able administrators of small hospitals. Another important recommendation of this committee will be a proposed plan for dividing the United States and Canada into geographical divisions, making official College representation available to administrators in every community.

The only meeting of the Credentials Committee, to pass upon applications for 1936, will be held in Chicago during the early part of August. This will afford ample time for administrators to submit their applications and for the College to complete its plans for the Third Convocation which will be held on Sunday evening, September 27, prior to the opening of the Convention of the American Hospital Association, in Cleveland.

Free copies of "The 1934-35 Study Committee of the Hospital Administrator" may be secured by writing to J. Dewey Lutes, Executive Secretary, 1931 Wilson Avenue, Chicago. This valuable information should be in the files of every hospital administrator for reference. Hundreds of requests have been filled since this booklet was introduced to the hospital field at the Saint Louis meeting.

Colorado

The Colorado Hospital Association will hold their annual meeting on April 28 and 29 this year, instead of in the Fall as in previous years. This meeting will be held jointly with the Colorado State Nurses' Association.

Indiana

The Indiana Hospital Association has established a uniform rate for the care of township cases throughout the State. They are requesting each hospital in the state to conform with the following fee schedule in the billing of all township cases:

Room rate—$3.00 per day per ward bed.

Minor operation— $5.00 for use of operating room.

Major operation—$10.00 for use of operating room.

Anesthesia—for minor cases—$5.00.

Anesthesia—for major cases—$10.00

Extra charge for laboratory, x-ray, medicines, dressings, and other services at prices prevailing in each community.

Minnesota

The dates of the next annual convention of the Minnesota Hospital Association have been changed to May 14 and 15, 1936. The meeting will be held at the Lowry Hotel, St. Paul.

Ohio

The Ohio Minimum Wage Board has established the following minimum wages for such female and minor male help as are employed in food departments of restaurants and hotels:

In cities of more than 500,000 population—29 cents an hour or $13.92 for a 48-hour week.

100,000 to 500,000—27 cents or $12.96.

5,000 to 100,000—25 cents or $12.

Less than 5,000—23 cents or $11.04.

For employees receiving tips:

More than 200,000—23 cents or $11.04.

10,000 to 200,000—22 cents or $10.56.

Less than 10,000—21 cents or $10.08.

Under both scales employers would be permitted to deduct not more than $3 a week for meals.

As was previously announced, the Ohio Hospital Association was successful in obtaining a favorable decision from the Minimum Wage Board writing a separate classification. Accordingly, the above schedule will not apply to their dietary help, but a separate study will be made for the establishing of minimum wages for this type of help in hospitals.

Ohio

Ohio hospitals have been granted full exemption from the sales tax on all purchases made by hospitals organized "not for profit." Final ruling has not as yet been made as to whether they will be required to charge the sales tax on sales made other than for service.

Pennsylvania

The Pennsylvania Hospital Association in December began a series of weekly featured articles designed primarily to educate the public in the "romance of hospitals." The first of the series was sent to 554 newspapers throughout the State, and they will continue to run indefinitely if sufficient papers use them and make the effort worthwhile. Below is a reprint of one of the articles just as it was sent out, except that in this reprint fictitious names are used for the signature.

All articles are to be brief—none to exceed 200 words. It is the intention that in all of them the hospital angle will be introduced only indirectly; in some there will be no reference to hospitals at all. Every article will, however, deal directly with the healing art in some way. Considerable study has been made in the preparation of these articles.

In the first section, which contains eight articles and enough therefore for two months' run, they are using the names of sixteen local administrators who had previously given them permission to use their names in publicity matters. They intend in the next series—which is now in preparation—to be able to use many more names and thus alternate their use in their local fields.

The central idea in the series is very close to the

No More Backaches for Patients or Nurses!

THAT'S another reason why the Spring-Air sleep cushion is the only completely satisfactory hospital mattress. Its more luxurious comfort will help your patients to rest completely relaxed, and its flexible construction means the end of back-breaking labor in turning, airing, and sterilizing your mattresses.

GENUINE KARR WHITE TAG CONSTRUCTION Guaranteed 20 years from date 1936

A SECRET of Spring-Air's flexibility lies in its **guaranteed** KARR spring construction. With this unequaled guarantee Spring-Air also offers these exclusive features: Ease of handling, airing and turning . . . Made by Masters . . . patented corner straps . . . completely sanitary . . . greatest economy . . . and, of course, greatest prestige.

Spring-Air

TRADE MARK REG. U.S. PAT. OFF. AND CAN. CHARLES KARR COMPANY, HOLLAND, MICH.

AMERICA'S FINEST HOSPITAL MATTRESS

ST. LUKE'S HOSPITAL, CLEVELAND (LEFT), AND MT. SINAI HOSPITAL, NEW YORK (RIGHT) ARE TWO OF THE THOUSANDS OF HOSPITALS AND HOTELS USING SPRING-AIR MATTRESSES.

Write for free literature and complete information

MASTER BEDDING MAKERS of AMERICA

Executive Offices: Holland, Michigan

47 factories, coast to coast, United States and Canada

"Believe It or Not" theme. Like Ripley, they have adopted a colloquial phrase as their "standing head." It is: "It's a Fact . . ." Following is the reprint mentioned above:

It's a Fact

By JOHN DOE, Superintendent,
John Doe Hospital

The ancient doctor was in danger of having both hands cut off if his patient died.

The old Babylonians introduced such a law in 2250 B. C. If the doctor failed to cure he received no fees. If the patient died the public executioner lopped off the physician's hands.

But if the doctor cured, say, an abscess of the eye he could collect 10 shekels of silver. That would be about $150 today! Throughout the world that was the rule a generation or so ago—high fees.

Not more than 250 years ago Dr. Claver Morris, a country practitioner, charged his patients what would be the following present day fees: $3.15 a visit to a poor but employed patient; $6.25 a visit to a small tradesman and $13.15 a visit to a substantial citizen in confortable circumstances!

It was high fees and little science then. Now it's reversed. Even a costly illness today is less expensive because present medical science is quick compared to yesterday; 25 years ago a patient stayed twice as long in a hospital.

Conference of State and Province Association Secretaries

The following program has been announced by the Committee in charge of the Conference of Province and State Secretaries, to be held in Chicago, Monday, February 17:

Opening Announcements

Miscellaneous Business

Round Table—*Sectional Convention Exhibits*
Leader: Carl P. Wright,
Secretary, Hospital Association of State of New York

Round Table—*Rotation of Convention Dates and Development of a Speakers Bureau*
Leader: G. Harvey Agnew, M.D.,
Secretary, Canadian Hospital Council

Round Table—*Sectional Publications*
Leader: John N. Hatfield,
Secretary, Hospital Association of Pennsylvania

Round Table—*Financing of Sectional Associations*
Leader: Byron W. Stewart,
Secretary, Ohio Hospital Association

Round Table—*Development of Sectional Association Membership*
Leader: A. G. Hahn,
Secretary, Indiana Hospital Association

Questions and General Discussion

Adjournment

The value of the Conference depends upon the attendance, and from replies being received, a large attendance is indicated.

This Conference will be followed, on Tuesday, February 18, by a conference of the Trustees and members of the Joint Committee of the American Hospital Association with the presidents, secretaries, and chairmen of the legislative committees of the sectional associations, on Federal activities and other matters of mutual interest to the American and Sectional Associations.

Official Instructions for Hospital Care Given Compensation Cases Under the Works Progress Administration

Inasmuch as W.P.A. projects were not started to any extent until October, we advise you that in August, of 1935, there was mailed to all hospitals a complete report, by the Joint Committee of the three National Hospital Associations, covering their agreement with the U. S. Federal Employees' Compensation Commission for the hospital care of W.P.A. compensation cases. This agreement was essentially the same as that made for the care of C.W.A. patients, except that the rate for room and board was raised from $3.50 to $4.00 per day.

The rate of $4.00 per day, plus the allowable charges covered by items 1 to 6 inclusive, are to apply universally to all hospitals. For your information the complete schedule of hospital fees is being reprinted below. Note that due to printing error, items 5 and 6 of the original C.W.A. agreement were omitted in schedule for W.P.A. compensation cases issued in August.

You are referred to the original report for the complete details of basic policies and working agreements. Charges for hospital service are to be rendered on the Commission's voucher form S. 69, properly itemized and given to the local W.P.A. administrator for transmission to the U. S. Employees' Compensation Commission for direct settlement.

Schedule of Hospital Fees Agreed Upon Between the Joint Committee of the American, Catholic, and Protestant Hospital Associations, and the U. S. Employees' Compensation Commission

A per diem rate not in excess of $4.00 will be allowed for all hospital cases of injured employees of the Works Progress Administration in all general hospitals, except Federal hospitals, throughout the United States and will include the use of a single room when necessary. It will also include any special diets, ordinary nursing or usual dressings, surgical supplies, material for plaster casts, and medicines.

Included in this rate are general medical and surgical care by the house staff, and such items as colonic irrigation, hypodermoclysis, and routine laboratory examinations, such as:

Blood counts, smears, Wassermann and Widal tests, etc., agglutination tests, blood typing, coagulation time, hemoglobin estimation, and occult blood.

Skin tuberculin tests, spinal fluid smears, and cell counts.

Precipitation tests for syphilis, sputum examination for tubercle bacillus, other usual bacteriological tests and the usual urine tests.

Also included in this charge will be such physiotherapy treatments as may be necessary for patients in hospital; there will be no charge for medical or hospital reports unless an actual transcript of the hospital record be requested, in which case charge for same will be made in accordance with the local

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3-POINT SYSTEM of EFFICIENT ECONOMY

1 LIME CONTROL

STAINED dishes, DULL glassware and silverware, SCALE in the dishwashing machine, CLOGGED spray nozzles and wash arms—these are all caused by LIME and GREASE. *Lite-ning K-O-L controls—dissolves Lime and Grease.*

A simple, one-minute "glass test" demonstrates how K-O-L *Knocks Out Lime.* This new discovery insures clean, bright, *sanitary* table service—free of stain and bacteria-breeding grease film. It eliminates scouring, "china dipping" and frequent acid de-liming of the machine. *It will solve your dishwashing problems.*

2 STOCK CONTROL

Now you can issue exact daily requirements from your stockroom systematically—with the *K-O-L Economy Control Carton.* No more misuse and wasteful digging from barrels. This convenient, orderly method of handling dishwashing compound makes stock control *easy* and *positive.*

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The "key" to dishwashing efficiency—the K-O-L Automatic Dispenser.

The K-O-L Dispenser automatically feeds compound into the machine as required to maintain a uniform strength solution. By eliminating irregular hand-feeding, it prevents waste—*reduces compound consumption.* This exclusive "DuBoy" development in no way compares with containers often referred to as "dispensers."

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public stenographers' rates. There will be no charge for autopsies or reports of same when a patient dies in the hospital.

In addition to the above rate it will be permissible to make the following extra charges:

(1) An operating room fee of $5 for a minor operation and $10 for a major operation. A general anesthesia fee of $5 for a minor operation and $10 for a major operation, to include anesthetic service by a salaried employee of the hospital and the cost of the anesthetic.

(2) Laboratory examinations of an unusual character, such as complete blood chemistry; gastric analyses, etc., may be charged for at a rate of from $3 to $5, according to the nature of the examination (which must be specified in the voucher submitted), $3 being the usual charge allowed for such examinations and reports.

(3) Fee for special nursing when necessary will be allowed in accordance with the local prevailing rate or when furnished by a salaried employee of the hospital, at actual cost.

(4) X-ray examination will be paid for in accordance with the following rate, the number of films and procedure for each fee being indicated by the description below:

	No. of films	Price
Ankle, joint, anteroposterior and lateral views	2	$2.50
Arm, humerus, anteroposterior and lateral views	2	2.50
Bladder, with injection, anteroposterior and lateral views	1	5.00
Chest, for pulmonary or cardiac diagnosis, plain	1	3.75
Chest, for pulmonary or cardiac diagnosis, stereoscopic	2	5.00
Clavicle, postero-anterior view	1	2.50
Elbow, anteroposterior and lateral views	2	2.50
Fluoroscopy, when required, without film	1	1.00
Foot, anteroposterior and lateral views	2	2.50
Forearm, radius and ulna, anteroposterior and lateral	2	2.50
Foreign body in eye, location of (the fragment charted in three planes and its dimensions ascertained by the method of Sweet or equivalent as needed)		12.50
Gall bladder, Graham technic, including cost of dye	1	10.00
Gastro-intestinal tract, complete x-ray study, including fluoroscopy, as needed		12.50
Hand, anteroposterior and lateral views	2	2 50
Hip joint, plain, anteroposterior view	1	3.75
Hip joint, stereoscopic, anteroposterior view.	2	5.00
Intestine, barium clysma, 13x17 films for position and outline as needed		7.50
Jaw, upper or lower	1	2 50
Kidneys, right and left, for comparison, 11x14 films as needed		5.00
Knee joint, anteroposterior and lateral views.	2	2.50
Leg, tibia and fibula, anteroposterior and lateral views	2	2.50
Lipiodol injection for bronchiectasis, etc., including roentgenograms and interpretation, as needed		12.50
Pelvis, 14x17, single film, anteroposterior view	1	5.00
Pyelography, using uroselectan or similar preparation (including cost of drug)	4	10.00
Ribs, plain view over suspected area, 10x12 film	1	3.75
Scapula	1	2.50
Shoulder joint, plain, anteroposterier views	1	2.50
Shoulder joint, stereoscopic, anteroposterior views	2	5.00
Sinuses, frontal and ethmoid, anteroposterior and lateral views	2	5.00
Sinuses, mastoid, right and left sides, for comparison	2	5.00
Sinuses, maxillary, anteroposterior and lateral views	2	5.00
Skull, ventriculogram—air injection as needed		7.50
Skull, anteroposterior and lateral views	2	5.00
Skull, stereoscopic	2	7.50
Spine, cervical, anteroposterior and lateral views	2	5.00
Spine, dorsal, anteroposterior and lateral views		5.00
Spine, lumbosacral, with coccyx, anteroposterior and lateral views	2	5.00
Stomach, barium or bismuth meal, 14x17 film, after ingestion four 8x10 films for detection of duodenal cap; total of four 8x10 films including fluoroscopy	4	12.50
Teeth, single film	1	1.00
Teeth, each additional film up to and including five films	(1-5)	1.00
Teeth, series (five films up to and including full mouth)	(over 5)	5.00
Thigh, femur, anteroposterior and lateral views	2	3.75
Ureters, right and left, for comparison	(1 or 2)	7.50
Wrist, anteroposterior and lateral views	2	2.50

(5) Unusual expensive medication will be supplied at cost. This includes such items as oxygen administration (marked preference being given to the use of commercial oxygen) biologicals; prosthetic and orthopedic appliances, when furnished by the hospital. Blood transfusions not to exceed $5 per 100 c.c. to donor, and a hospital charge of $5 for the transfusion as a minor operation will be allowed.

(6) Ambulance charges when furnished by the hospital may not exceed a minimum rate of $3 when the call is within a three mile radius of the hospital. An additional rate of 50 cents per mile beyond the three mile radius, one way, will be allowed.

(7) Professional and other fees of persons not employed by the hospital are not included in this agreement.

(8) FEES, HOSPITALIZATION, AND PROPHYLACTIC TREATMENT OF CONTAGIOUS DISEASES NOT ORDINARILY TREATED IN GENERAL HOSPITALS ARE NOT INCLUDED IN THIS AGREEMENT AND SHOULD BE SUBJECT TO LOCAL REGULATION.

Report on Joint Advisory Committee Federal Legislation

C. W. A.

The U. S. Employees' Compensation Commission will continue to recognize C.W.A. claims for hospitalization, provided information is already on file in the local C.W.A. office, showing that actual injury was sustained by the patient while employed on C.W.A. work, and provided hospital can prove by substantiary evidence that hospital service was rendered.

W. P. A.

As noted elsewhere in this Journal, W.P.A. compensation cases are to be billed according to agreement effected between the Joint Committee of the three National Hospital Associations, and the U. S. Employees' Compensation Commission. The rate of

$4, plus allowable extras, applies to all hospitals receiving W.P.A. patients.

The U. S. Employees' Compensation Commission requests that all hospitals be notified that local W.P.A. administrators may send patients to hospitals who are employed on W.P.A. projects but whose illness or injury was not sustained in the course of their occupation. Such cases, regardless of the fact that they were sent to the hospital by the local W.P.A. administrator, are not compensable by the Government. It is the obligation of the hospital to determine cause for admission.

The financial responsibility for the hospitalization of a W.P.A. employee for a non-compensable injury or illness, and for the hospitalization of his dependents, should be judged by the hospital, the same as they would judge a similar case where the employee was employed by private industry at the same wages and was living under the same social conditions. The fact that the employee is working on a W.P.A. project should give no special consideration to the case.

No Federal funds are available for the medical examination of persons on relief before they are transferred to W.P.A. employment. It is the obligation of local relief authorities to determine whether the person on relief can be transferred to W.P.A. employment. Any medical examination paid for by the local agency would have to come from local or state sources.

Transients

No Federal funds are now available for the care of transients, and in view of the fact that Federal direct relief has been withdrawn from the resident indigent, there is little likelihood that any funds will be made available for the care of transients.

Processing Taxes

Due to breadth of the decision of the Supreme Court covering the constitutionality of the A.A.A., no information is as yet available as to the status of claims of hospitals for refund of processing taxes already paid. The Joint Committee will follow this matter closely in Washington, and, as soon as ruling can be secured, hospitals will be given complete information in regard to the securing of refunds of processing taxes already paid.

Social Security Act

While the official regulations covering exemptions

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• "We were able to do our laundry work *more economically*, *quicker* and with much *less effort* on the part of our workers."

THAT'S the concise statement of James A. Sinnott, M. D., Superintendent of the Lane County Juvenile Detention Home, Detroit. Dr. Sinnott further adds: "We suggest to any hospital or institution head that they take advantage of this service." American advisors are constantly privileged to help hospitals improve their laundry production, speed up their washing-ironing-pressing service and reduce their linen inventories. May we again remind you that their services are at your disposal, now or any time, without obligating you in any way?

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from this Social Security Act have not as yet been announced, we are assured that these will parallel the exemptions of charitable institutions from the income tax, now existing; namely, 101 (6)-1 of Income Tax Regulations No. 86, published in 1934. Accordingly, any hospital that is exempt from the income tax would also be exempt from the requirements of the Social Security Act and would not be required to file any payroll or other report.

Under the maternal and child welfare provisions, the only money available for hospitalization is for the care of crippled children. Under the maternal health program, local authorities will be permitted to engage nurses to assist doctors at home deliveries, but no Federal funds can be used for either hospital or doctors' fees.

No money donated to a private hospital for maternal or child welfare can be used by the State in matching of Federal funds for the securing of the latter. Any donated funds to be available for matching will have to be given to a public fund, with no restrictions as to use.

Hospitals are advised to read an article on page 51, in the January 4, 1935, issue of the *Journal of the American Medical Association* in regard to a meeting of the Advisory Committee of the Maternal and Child Welfare Service, which contains the information of the provisions of that Act as interpreted by the Committee.

The Weekly Legislative Bulletin

The Association will again issue a weekly bulletin covering the introduction and progress of legislation in National and State legislatures, and in the Dominion Parliament. These bulletins will be sent to all presidents, secretaries, and chairmen of the legislative committees of each regional organization, and hospitals are urged to keep close contact through their State Associations with legislation affecting institutions in their state.

Many favorable inquiries are being received in response to the recommendations of the Advisory Board for Medical Specialties, which was recently mailed to the membership. These recommendations are being adopted by the medical staffs and the governing boards of the hospitals, and will be followed in the making of future staff appointments.

A committee of fifteen hospital executives, representing the major cities of the State, has been appointed, with John R. Mannix as chairman, to make plans for the formation of a permanent state organization to supervise state-wide periodic payment plans for hospitalization.

The Hospitalization of the Chronically Ill

Chronic diseases are growing at a rate which suggests that America may some day become essentially a nation of invalids. If, as students of history claim, national downfall is the inevitable lot of a devitalized people, it is incumbent on health departments and the medical profession to try to prevent further physical deterioration of our people.

To lavish all our resources on acute illness, while neglecting the chronically ill, is neither wise nor just. Many communities inconsistently spend millions for the construction and maintenance of hospitals for the acutely ill, while begrudging even small sums for the care of chronic patients. Neglected, dilapidated, hopeless in outlook, the chronic hospital often arouses a feeling of repugnance if not of downright disgust. We must change all this by making the chronic hospital a center for medical research in its special and transcendently important field.

Since mental factors play an important role in the causation of chronic disease, an effort should be made to integrate mental health services with medical services in the study and treatment of chronic diseases.

For nervous and mental cases the United States has provided, chiefly in state institutions, a total of 513,000 beds. The most striking thing about mental hospitals is their startling growth from 373,000 beds in 1927 to 513,000 beds in 1933. Project this curve of growth into the future for twenty years more and instead of half a million mental hospital cases, we shall have a million. If we do not wish to see a million Americans in mental hospitals in 1955, we must vigorously support every social agency, every educational committee, every medical group which is studying the problem of mental hygiene for children and adolescents, for it is during these critical early years that the mental future of individuals is to a great extent determined.

—Excerpts from a radio address by Dr. S. S. Goldwater, Commissioner of hospitals, New York.

The Allergy Unit at the Facility, Aspinwall, Pennsylvania

The Medical and Hospital Service of the Veterans' Administration has established an Allergy Unit at the Facility, Aspinwall, Pa., under the direction of Dr. Leo H. Criep. The laboratory department of the Allergy Unit will fabricate all allergens necessary for skin testing, and will supply the extracts to the other Facilities of the Veterans' Administration. The Allergy Unit will be the center for teaching physicians of the Veterans' Administration the scope, the usefulness, and the limitation of allergy diagnostic and desensitization methods.

The Abington Memorial Hospital Will Raise $400,000

A threefold campaign to raise $400,000 will be launched late in February by the Abington Memorial Hospital in Abington, Pa. The funds sought from the public will be used to erect an addition to the nurses' home, to liquidate capital indebtedness on its new buildings, and to pay off operating deficits which have piled up during the depression.

A feature of the campaign is the fact that the appeal for an additional building is made before the expenses of erecting the present buildings have been fully met. This, however, is explained by a further unique feature, namely, that the hospital has no hard luck story to tell.

"The story of Abington Memorial Hospital is a success story," declared the hospital trustees in announcing the forthcoming $400,000 campaign. "The hospital from year to year, progressively, has fulfilled the purposes for which it was created. It has measured and met the public's needs with an exactitude almost as scientific as its diagnosis of individual patients.

"In 1927, when the Development Program was undertaken, the prediction was made that by 1935 the people dependent upon Abington Memorial Hospital would require 70,000 days of hospital care in a year. Actually, more than 68,000 days of care were given in the fiscal year ending May 31, 1935."

In 1927, the hospital conducted a fund-raising campaign for $1,500,000 for new buildings, equipment and furnishings, and for the remodeling of the existing buildings to produce an integrated modern hospital adequate for the demands of the growing population. In the forty communities with a population of 65,000 in the hospital's service zone, more than 10,000 residents contributed slightly more than the million and a half which was asked of them.

Costly difficulties which had not been anticipated presented themselves in the remodeling of the existing buildings, and more space than originally had been planned was provided. Wherever there was a question of economy, however, at the expense of the desired quality, the additional expense was allowed. Nevertheless, the public was not asked to increase its investment, but thirty-five public-spirited citizens —the board of trustees and several of their friends —subscribed $600,000 privately subsequent to the campaign of 1927. Altogether, the total cost of the present plant and the remodeling of the buildings given by the founder was $2,243,000.

In the $400,000 fund-raising enterprise, $160,000 will be sought to pay off the indebtedness incurred in the building program, the balance being devoted to an addition to the nurses' home and to liquidating the accumulated operating deficits of recent years, brought about by the heavy burden of free and below-cost service by the hospital.

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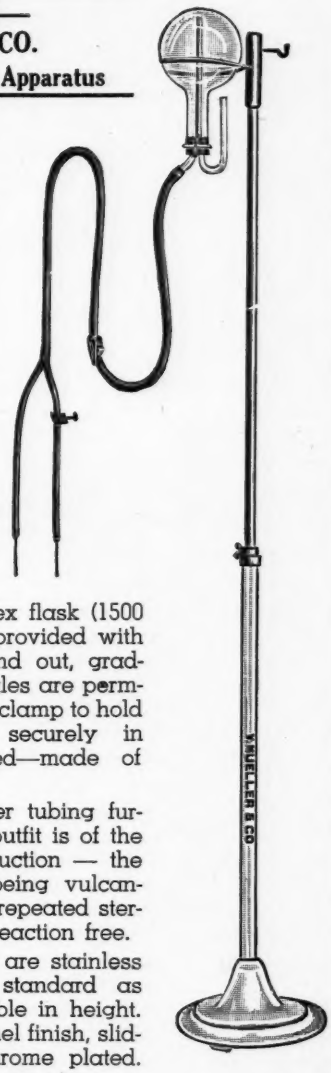

Represents the latest development in equipment for hypodermoclysis and intravenous therapy.

The simplified technique — using the same flask for preparing and administering the solution—eliminates possible contamination, saves time and is most economical for hospital use.

The genuine Pyrex flask (1500 c.c. capacity) is provided with two scales, in and out, graduated. These scales are permanent. A special clamp to hold rubber stopper securely in place is supplied—made of rustless steel.

The amber rubber tubing furnished with the outfit is of the one-piece construction — the branch portion being vulcanized. Will stand repeated sterilizations and is reaction free.

The needles sent are stainless steel; the floor standard as shown is adjustable in height. French grey enamel finish, sliding parts are chrome plated. Designed for long service.

Prices sent upon request.

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Comments From Our Readers Upon Receipt of the January Issue of "Hospitals"

HOSPITALS is very much gratified at the very fine reception given its first issue, the January number. We are very much in earnest in our efforts to make HOSPITALS a publication of the largest possible value and service to the hospital field.

Excerpts from some of the letters received from our readers, referring most highly to the January issue of HOSPITALS, are printed below.

The staff of HOSPITALS appreciates greatly the courtesy which our readers have so thoughtfully extended.

"The mechanical make-up of the magazine, the cover, the lay-out and design, its type and titles, and the arrangement of both your editorial and advertising material seem to me excellent in every respect."

Perry Addleman,
The Chicago Hospital Council

"Congratulations on HOSPITALS. Greatly pleased and impressed."

Ray Amberg,
University of Minnesota Hospital,
Minneapolis, Minn.

"The January issue of 'Hospitals' made a very favorable impression. I congratulate you upon the first issue and extend my best wishes for the future success of this publication. I am sure that the entire hospital field appreciates it."

Arthur C. Bachmeyer, Dir.,
University Clinics,
Chicago, Ill.

"I want to congratulate you upon your first issue of 'Hospitals.' You have gotten off to a flying start and I am sure through its publication you will be rendering a service to the hospital field."

R. H. Bishop, Jr., M.D.,
The University Hospitals,
Cleveland, Ohio

"I am just taking this occasion to acknowledge receipt of this and also to tell you of my enthusiasm for the appearance and content of the magazine. It is pleasing; the paper is of good quality; the printing is clear, and it should make a very distinct and immediate place in the libraries of all those who are concerned with the message it has to offer. Congratulations to you and the Publication Committee."

B. W. Black, M.D., Med. Dir.,
Alameda County Institutions,
Oakland, California.

"HOSPITALS just came and first off, a note of congratulation. Its quality-idea, make-up, cover, type, finish of paper and management—all do credit, both to you and to the Association.

John H. Bresnahan, M.D.,
U. S. Veterans Hospital,
Lincoln, Nebraska

"I wish to compliment you most highly upon the first issue of HOSPITALS. I am certain that this journal will meet a very enthusiastic reception on the part of hospital administrators everywhere. It is attractive in appearance; the type is readable and the paper is free from glare."

F. G. Carter, M.D., Supt.,
The Christ Hospital,
Cincinnati, Ohio

"I want to congratulate you and your editorial board on your first issue of HOSPITALS. It is splendid."

Warren F. Cook, Supt.,
New England Deaconess Hospital,
Boston, Mass.

"I wish to take this opportunity to express to you and the Association my best wishes for your success in this undertaking for the Association. I trust that each and every one of the hospital workers will appreciate this magazine as I have no doubt but that it will aid them in their daily work."

S. Chester Fazio, Supt.,
Rockaway Beach Hospital,
Rockaway Beach

"Congratulations on your first edition of HOSPITALS. You have done an immensely fine job. The success of the Journal is, of course, certain. I wish, however, its success might be even beyond your expectations."

Edward A. Fitzpatrick, Dean,
Graduate School,
Marquette University,
Milwaukee, Wis.

"The January number, the initial number, of the magazine 'Hospitals,' published by the American Hospital Association, is a credit to you and to all who had a part in its make-up."

J. B. Franklin, Supt.,
Grady Hospital,
Atlanta, Ga.

"Certainly enjoyed the new magazine. It is the best."

Lee C. Gammill, Supt.,
Baptist State Hospital,
Little Rock, Ark.

"I have just received the first copy of the new format of HOSPITALS and I want to congratulate you and those who worked with you on the excellent make-up of the magazine. It is excellently gotten up and with the backing of the Association should prove most valuable. May I wish you continued success."

Oscar Gottfried, Publisher,
The New York Physician

"Please accept congratulations upon the new Journal HOSPITALS. I sincerely hope that everyone will appreciate the vast amount of work necessary to complete such an interesting and educational Journal."

Albert G. Hahn, Business Administrator,
The Deaconess Hospital,
Evansville, Indiana

"Your magazine strikes a very pleasant note and I want to express to you my appreciation of what you are doing, and extend my heartiest congratulations to you and other members of HOSPITALS' staff.

H. Eldridge Hannaford,
Architect,
Cincinnati, Ohio

"HOSPITALS came as a very pleasant and agreeable surprise. I hope that it will go forward progressively and that sometime it will reach the point where it can dispense with advertising as a vehicle to success."

A. R. Hazzard, Supt.,
Easton Hospital,
Easton, Pa.

"We should like to take this opportunity to congratulate you and the Association on your new journal HOSPITALS. This is certainly a fine piece of work and we believe that it should be thoroughly enjoyed by all."

J. H. Holcombe, Supt.,
St. Luke's Hospital Association,
Jacksonville, Florida

"Permit me to congratulate you upon the first number of HOSPITALS, the official journal of the American Hospital Association. I have looked forward to the arrival of this magazine with a great deal of interest, and I must say it has far exceeded my expectations. It is artistic, instructive, easy to read, and I know will be most helpful to hospital administrators."

Adeline M. Hughes, R.N., Supt.,
Jewish Hospital,
Louisville, Ky.

"Let me extend to you my congratulations both on the mechanical and artistic merit of this magazine, and also upon its skillful and superior editing."

Justin F. Kimball, Exec. V. P.,
Baylor University,
Dallas, Texas

"I want to extend to you my personal congratulations on the fine start you have made with your publication HOSPITALS. You have set a real mark for your future issues to measure up to."

F. P. G. Lattner, Secretary
Finley Hospital
Dubuque, Iowa

"The first issue of HOSPITALS is a credit to you and a triumph in the hospital field. I have gone through it carefully from cover to cover and am delighted with the set-up and general tone of the publication."

J. Dewey Lutes, Executive Secretary
American College of Hospital Administrators
Chicago, Illinois

"Congratulations are very much in order as the magazine is outstanding in every way. The paper is of excellent quality, the type stands out clear and your style of type is excellent in every way. You have cause to be proud of this issue and I know that congratulations will pour in upon you from every side."

John A. McNamara, Dir.,
The Cleveland Hospital Service Association

"The first issue of HOSPITALS arrived this morning. Permit me to congratulate you and the officers of the American Hospital Association on this fine publication."

H. S. Mehring, Bus. Dir.,
Pennsylvania Hospital,
Philadelphia, Pa.

"Please accept my congratulations on the first issue of HOSPITALS as to content, appearance, and general readability"

C. W. Munger, M.D., Dir.,
Grasslands Hospital,
Valhalla, N. Y.

"I have read with interest the first issue of HOSPITALS, journal of the American Hospital Association published under your direction and I congratulate you and the Association."

W. G. Nealley, M.D., Dir.,
The Brooklyn Hospital,
Brooklyn, N. Y.

"Congratulations on HOSPITALS! Both in form and substance it is highly creditable."

Charles F. Neergaard,
Hospital Consultant,
New York City

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"Congratulations on the first number of the new Journal. It is not only attractive and unique in its cover and general appearance, but the subject matter and arrangement is most commendable, in my opinion."

Robert E. Neff, Administrator,
University Hospitals,
Iowa City, Iowa

"As Editor-in-Chief of HOSPITALS, may I congratulate you and the American Hospital Association upon the new magazine, a copy of which has just reached me. Hoping that all the future numbers of HOSPITALS may be as satisfactory as the present one and again with congratulations to you."

George O'Hanlon, M.D., Med. Dir.,
Department of Public Affairs,
Medical Center, Jersey City

"Congratulations on the splendid realization of the heralded HOSPITALS magazine. Best wishes for its success and for your personal happiness and well-being throughout the new year."

G. W. Olson, Asst. Supt.,
The Los Angeles County General Hospital
Los Angeles

"May I extend to you and your assistants on the Editorial Board my personal congratulations on turning out such a fine piece of work. The format is a delight to the eye, and it is my feeling that you have made a great advance in making this change."

Chas. A. Pelton, M.D., Asst. Supt.,
The Boston City Hospital,
Boston, Mass.

"HOSPITALS more than meets the high standard of excellency which I had anticipated would be achieved, and I bespeak for it a most successful future. I wish to add my congratulations to the ones which you will receive from many of your other friends."

Charles S. Pitcher,
Hospital and Institutional Consultant,
Philadelphia

"May I congratulate you on the type of magazine it is, and express the sincere appreciation of—I am sure—many who, like myself, are engaged in work outside of General Hospitals but who are interested in the Administration side of the work will welcome this publication."

Miss C. M. Powell, R.N., Supt.,
Blythedale Home,
Valhalla, N. Y.

"Congratulations on your splendid new magazine. We have enjoyed the first issue from cover to cover, and we feel that it will be most helpful to everyone in the hospital field."

K. M. Prindiville, Supt.,
Lawrence and Memorial Associated
Hospitals, Inc.,
Lawrence, Mass.

"Congratulations on your new magazine! It is a "knock-out." Personally I feel it is the biggest advancement made by an Association in years, and that its success is assured from the start."

Donald C. Smelzer, M.D., Dir.,
The Graduate Hospital,
University of Pennsylvania

"May I express to you my surprise and pleasure for the excellent Journal of the American Hospital Association, called HOSPITALS which came to my desk this past week. I am delighted with the name, the artistic cover, the quality of the paper, and the type of print, but I am more delighted with the Editorial Council and the contributions which they and others have made in this first issue. I am positive that this Journal will meet a need and will be received with appreciation by thousands of hospital workers everywhere."

Clinton F. Smith, Exec. Sec.,
University Hospitals,
Iowa City, Iowa

"Just a line to congratulate you on the first issue of the Journal of the American Hospital Association known as HOSPITALS. This publication not only pleased me but has caused widespread favorable comment among our hospital executives."

Carl P. Wright, Exec. Sec.,
General Hospital of Syracuse,
Syracuse, New York

"Your magazine HOSPITALS seems to be just the one I need in my work and I thank you for having included it with membership in the American Hospital Association."

Mrs. Caroline Van Zandt
Jefferson County Tuberculosis Hospital
Beaumont, Texas

National Hospital Day

Albert G. Hahn, Chairman of the National Hospital Day Committee, has announced the receipt of the following interesting letter from the Metropolitan Life Insurance Company:

"Answering your letter of November 6, I can assure you that our Florence Nightingale pamphlet and our film strip on her life will be sent freely by this Company in answer to requests from hospitals celebrating National Hospital Day. We would suggest that application be made through our local officers, or direct to the Company's Welfare Division here in New York City, *with sufficient advance notice* to allow for supplying the material. Since our film strips and special school health pamphlets are not a part of the stock regularly used by our district office and we cannot know in what communities they will be needed, our local representative will not have supplies on hand."

Correction

Our attention has been called, by several superintendents of institutions in Boston, to the fact that in a table of water rates charged hospitals by different cities in the United States published in the January issue of HOSPITALS, Boston was listed as making no charge.

We are informed that Boston does make a charge to voluntary hospitals for water. The meter rates, computed quarterly, are:

	per 1,000 cu. ft.
First 20,000 cu. ft.	$1.84
Second 20,000 cu. ft.	1.71
Third 20,000 cu. ft.	1.58
All over 1,000,000 cu. ft.	1.05

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A Tribute to a Distinguished Citizen

Practically all of the older institutions in the United States, particularly those founded a century or more ago, owe their established growth to philanthropic men and women who gave not only of their funds but of their time as well, to help humanity.

In the ancient Warren A. Candler Hospital in Savannah, Georgia, formerly the Savannah Hospital, is found this tribute in marble to one of Savannah's distinguished citizens:

"This marble perpetuates the name of John J. Kelly, obit 22 July, 1872. For nearly twenty years a manager of this institution, its daily visitor during one of our fearful epidemics until himself prostrated. Cared for those who could not care for themselves the legend of his life and sealed at his demise by substantial legacy to this, their refuge. When the ear heard him, then it blessed him; and when the eyes saw him, it gave witness unto him; because he delivered the poor that cried, and the fatherless and him that had none to help him."

Dr. Nolan E. T. Lewis to Neurological Institute

The Neurological Institute, one of the units of the Columbia Presbyterian Medical Center in New York, has appointed Dr. Nolan E. T. Lewis, formerly director of laboratories at St. Elizabeth's Hospital, Washington, D. C., as assistant director in charge of clinical and clinico-pathological research.

The Institute is making extensive alterations to the thirteenth and fourteenth floors of its building. This space is to be devoted to diagnostic and research laboratories. Mr. Charles F. Neergaard is the consultant.

Johns Hopkins Hospital Receives $900,000

The late Albert Marburg left an unrestricted memorial fund of $900,000 to Johns Hopkins Hospital, Baltimore, Md. The other hospitals benefiting from this will are: Union Memorial Hospital, $50,000; Children's Hospital School, Inc., $5,000; James Lawrence Kernan Hospital and Industrial School of Maryland for Crippled Children, $2,500; Long Branch, N. J., Hospital, $2,500; Ann May Hospital, Spring Lake, N. J., $1,000.

New Hospital to Be Built

It is planned to establish a small institution at Mechanicsburg, Pa., with the $227,006.39 left in the will of D. W. Seidle for the building of a hospital; the bulk of the estate will be used to maintain it.

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Of Special Interest to the Buyer

IN THE COLLEGE of Medicine at the University of Illinois, Dr. Julius H. Hess is Professor of Pediatrics. To his credit goes the design of an Infant Incubator which will, without doubt, capture the interest of superintendents and pediatricians. Scanlan-Morris Company make a feature of it in their catalog describing maternity equipment. Here is an application of scientific principles for the treatment of the newborn child which is bringing, we are told, approval from those who have responsibilities around the obstetrical department. Scanlan-Morris Company tell us it is equipped with accurate control of temperature obtainable anywhere that electrical connection is available. Humidity and fresh air supply is secured automatically. There is no danger of overheating because it operates on the water-jacket principle. Take the standard cover off, replace it with Dr. Hess's infant oxygen unit, and your incubator becomes a practical oxygen chamber for the treatment of asphyxia, cyanosis, or pulmonary infections. It is an ingenious looking piece of equipment.

THE COMFORT of the patient depends upon the superior intelligence of the management of a hospital. The old psychology seemed to be that the patient was out of luck for being ill and must "suffer" treatments in order to get well. The well-equipped hospital today spares no expense to treat patients with all possible comfort. It is that fine consideration which is at the bottom of genuinely good hospital service. Scanlan-Morris Company made us think of that when they were talking about their Oxygen Humidifier. It offers a simplified method which permits continuous administration without discomfort. The patient receives oxygen under normal room conditions, no enclosures, and is entirely accessible for nursing care. They say the humidifier is easily assembled, needs little supervision. Most important to the man who is trying to run an efficient hospital, is that the humidifier makes the benefits of oxygen treatment more generally available.

EVERY NEWCOMER in a hospital receives impressions from little things. Aside from the bed occupied by the patient, perhaps no spot can do more to bid for the patient's approval of your hospital than the patient's tray. It has had a lot of study both from the point of "fixing" and the artistic effect. We have even heard dietitians claim that the sight of a bright, clean, orderly tray has therapeutic value. We are inclined to believe that might be true in many instances. It is quite impressive to see what a silversmith can do for the hospital tray. Take The Gorham Company's presentation, as an example. Their designs look like models of modern silversmithing. After you finish admiring the sheer beauty of the designs, you observe that someone in their organization must have had the particular problems of the hospital in mind when the design was being planned. Not only will this ware pack efficiently on a tray, but such things as coffee or tea slopping over the top of the pot when the nurse carries it to the patient is eliminated. They have a new creation in hot water plates with an extra deep well, and a specially designed sugar dispenser which will certainly do something to work up a most favorable impression upon the most finicky patient.

THE SMALL and the medium sized hospitals have their own special problems in buying equipment. All too often manufacturers make equipment with the large sized institution in mind. While the small place has to shift along. Those buyers who know the Colt Autosan dishwasher will be interested to know that the manufacturers, Colt Patent Fire Arms Company, have just announced a new model RC-1. They tell us they have taken into consideration small kitchen space and have added an ingenious conveyor system which saves time and therefore hot water. The racks go through the wash sprays at a speed of four feet a minute and twice as fast through the rinse sprays. The automatic features are most interesting to watch. As they themselves say, "It does a big job in a small space."

PUBLIC IMAGINATION was given a treat in the news dispatches in 1933 when a newspaper man got hold of some facts on Suction-Pressure Therapy. In newspaper language he described "a cure" for gangrene—no longer would amputations be necessary. The use of suction in the therapy of peripheral vascular disease dates back many years. It remained for Landis and Hermann in Cincinnati (working independently), to work out methods for producing both the suction and pressure periods. Today the treatment of peripheral vascular disease by alternate suction and pressure has gained a definite place, but so far it is used only in selected cases. The Burdick Corporation sent us a description of their Suction-Pressure Therapy unit. They demonstrate that with this new unit there is accurate control of pressure and suction so that the technique of Landis or Hermann may be applied. There is full observation of the part undergoing treatment, comfortable position for the patient and simplicity of operation. The Burdick people point out that hospitals are taking a great interest in this unit. It is used on hospitalized cases and ambulatory patients. You will notice there is generally a rush for the scientific new thing, especially when public imagination has been stirred. It is true, the public is becoming better and better informed even though newspaper reporters sometimes generalize too much.

TALKING WITH a well known superintendent (a hound for details and by nature a research man) about the new Microdak introduced by the Eastman Kodak Company, we found that he actually registered enthusiasm. It happens that he is a strong advocate for making the case history sheet a work of art, the story complete and brief. Photographs of a cut section of all large specimens, he says, should be taken in order to preserve a permanent record of the gross appearance. Now, he says, it will be simple, less expensive and most practical by using the Microdak, to paste a photograph of the actual microscopic specimen right on the history sheet. He thinks this new product of Eastman's will serve to big advantage in the moderate sized and small sized hospitals where the services of a full time pathologist are not available. If you want to have photographs of what goes on under your microscopes, you will be interested in seeing the simple and clever way in which you can rig a microscope with the Microdak equipment. It should prove a boon to the month-

ly staff conferences. It is one way to obviate the use of messy gross specimens as part of the staff conference demonstration. He believes these "micro-photographs" will greatly facilitate the study of the record.

SURPRISING FACTS are brought to light when publicity departments get busy with the statistics of an industry. For example, the Southern Rice Industry sends us information which may interest some hospital people. They inform us that the Charity Hospital in New Orleans uses 40 tons of rice a year. Think what tonnage there would be if every hospital used a proportionate amount. Miss Millie F. Kalsem, dietary director of Cook County School of Nursing, Chicago, they announce, has written a book on "The Use of Rice on the Hospital Menu." She takes up the popular subject of overweight and underweight and the dietary treatment of many common diseases.

The Cancer Research Aid Fund

Several of our institutions have received communications from Mr. Mavlar Greenfield, requesting that he be furnished with the list of all cancer hospitals, cancer clinics, and cancer research stations in the United States.

In stating the objects of a Cancer Research Aid Fund, which rather ambiguously outlined a plan for the raising of a fund for a cancer research but did not state how it was to be distributed or used, Mr. Greenfield does not divulge the sort of scheme he has for raising the money, but evidently expects to receive his support entirely, or in part, from contributions, from the general public.

The Society for the Control of Cancer has not given its approval to Mr. Greenfield's movement.

The letter which is being addressed to hospitals by Mr. Greenfield, as managing director of the Cancer Research Aid Fund, reads as follows:

"We are in the process of organizing an association for the purpose of financially assisting Cancer Hospitals, Cancer Clinics and Cancer Research Stations in the United States, requiring such aid for further research, equipment and improvements.

"If you are one in the above group and are in need of such financial assistance, you will please advise the writer without delay. At the same time, you will please file with us a detailed statement of your financial requirements and purpose for such funds.

"Upon receipt of this information, we will enter your name in our records, as Member, and at the same time we will be able to ascertain what the total annual sum will be required for distribution to the Member Institutions."

Woodstock Hospital Gets $50,000 Gift

The Woodstock public hospital receives a bequest of $50,000 from the estate of Mrs. Jennie Lee Bentley, who died in Pasadena, Calif., two months ago.

Mrs. Bentley was the widow of Dr. George Bentley, a dentist who died two years ago. They formerly lived in Woodstock.

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The Hospital Book Shelf

TEXTBOOK OF STERILIZATION. Second Printing. By Weeden B. Underwood. American Sterilizer Company, Erie, Pennsylvania. 1935. $2.00.

The operation of a sterilizer is essentially an engineering procedure. Neither hospital superintendents nor surgical supervisors are commonly familiar with the engineering principles involved in the sterilization process.

The fourteen chapters of this book give a clear-cut exposition of the theory of steam sterilization, the accessories and controls necessary, methods of operation and reasons for failure.

Of particular importance is the author's warning of the dangers of relying on pressure gauge readings, rather than thermometer readings for control, the importance of frequent careful inspection of all gauges, traps, and other control apparatus, and the importance of the proper making of bundles and manner of packing them in the sterilizing chamber.

The chapter on solutions goes quite thoroughly into the making the more common solutions for intravenous use as well as into their sterilization.

Advances in our understanding of the technique of sterilization have been rather marked in the last few years and to avoid even the slightest suspicion of faulty sterilization it is important that every operating room supervisor should familiarize herself with the most recent knowledge on the subject.

The author's engineering training and years of research on sterilizer problems enable him to present the subject in such a comprehensive manner as to make it as its title states a textbook.

1936 NEWS ALMANAC FOR SOCIAL WORK.

The 1936 News Almanac for Social Work, published by Community Chests & Councils, Inc., is a compact list of dates, anniversaries, and events of significance for the interpretation of social work. Following the cordial reception given the first edition in 1935, the 1936 edition has been revised and enlarged to contain much new material and one-third more entries.

48 pp. Price 50 cents each; ten or more, 45 cents; twenty-five or more, 40 cents; special rates for larger quantities. Order from Community Chests & Councils, Inc., 155 East 44th Street, New York City.

COMMUNITY HYGIENE. By Laurence B. Chenoweth, M.D., and Whitelaw Reid Morrison, M.D. F. S. Crofts & Company, New York City. 1935. $2.50.

The introduction to this book says: "It is not what one knows about hygiene that is important but what he does with his knowledge in furthering a fuller and more efficient life for himself and those about him."

The book discusses the extent of illness in the United States, causes and modes of transmission of disease, various measures of disease control and "Public Health Administration." The book contains excellent illustrations and should be a valuable textbook for nurses and students of public health nursing.

ECONOMIC PROBLEMS OF MEDICINE. By A. C. Christie, M.D. Macmillan Company, New York City. 1935. $2.00.

This very interesting book discusses such subjects as medical education, medical ethics, medical economics, the physician and the hospital, physician's relation to the community, workmen's compensation, industrial medicine, and health insurance. The final chapter discusses Essential Elements in a Comprehensive Plan for Medical Care. The book contains an extensive bibliography.

MEDICO-LEGAL JURISPRUDENCE. Edited by Benjamin Werne. Current Legal Thought, Inc., 245 Broadway, New York City. Paper bound, $1.50. Cloth, $2.00. 1935.

This book is divided into three sections. Pt. 1. The law of medical practice. Pt. 2. Medical jurisprudence. Pt. 3. Evidence. Pt. 1 contains chapters on Hospitals, Liability of Physicians, etc. In Pt. 2 is a chapter on Workmen's Compensation. The Table of Contents of the book is very interesting.

NUTRITION IN HEALTH AND DISEASE FOR NURSES. By Lenna F. Cooper, Edith M. Barber and Helen S. Mitchell. 6th ed. J. B. Lippincott, Philadelphia. 1935. $3.00.

This book has been entirely rewritten, with new chapters, illustrations, and tables added, making it an ideal text for teaching. Discusses all phases of dietetics and diet therapy including the early history of dietetics in the United States. Pre-operative and post-operative diets are considered and also the food clinic.

METHODS AND MATERIALS OF HEALTH EDUCATION. By Jesse Feiring Williams, M.D., and Fannie B. Shaw. Thomas Nelson & Sons, New York City. $1.65. 1935.

School health education is discussed in this book, which includes such subjects as, the work of official and non-official organizations in health education, construction of the curriculum, methods and mate-

rials for teaching health, the nature of the child, tests and measurements, and the health of the teacher. Useful for school nurses.

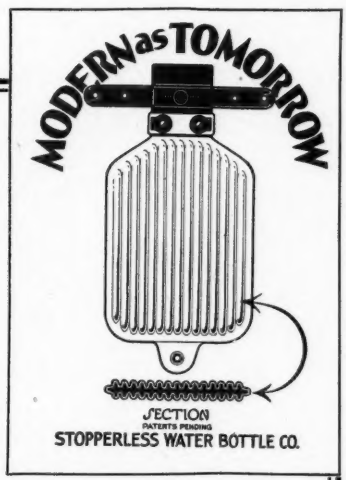
HEALTH AND HUMAN PROGRESS. By René Sand. The Macmillan Company, New York City. $3.00.

René Sand shows that human life could be much richer for all, if we would take the trouble to make it so; that much progress has been made but that much still remains to be done; that medicine in its widest sense has been a great factor in human progress and will be even more important in the future.

The author defines social medicine as the art of prevention and cure considered as "something which links the health of men to their condition as human beings." He classifies the elements of the population of various countries according to their financial resources, and arrives at what he calls a balance sheet of sickness and death.

The author points out that the increase in deaths in certain categories is a sign of progress when the deaths occur at the more advanced ages. He sees in the widely spread reduction of the birth rate something which is forcing the politicians of the world to realize that preventable sickness and premature death are an intolerable waste of human material, and that social medicine is a factor in human economy which must be encouraged and organized.

(*Continued to page* 133)



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Pentobarbital in Labor

M. B. LAVEN, M.D.

St. Ann's Maternity Hospital, Cleveland, Ohio

WE HAVE USED pentobarbital (nembutal) in labor since July, 1932, to obtain amnesia for approximately 2500 to 3000 patients. During these three years this drug alone has been given during the first stage and the first part of the second stage, adding as a rule drop ether late in the second stage and throughout delivery, with nitrous oxide being used occasionally instead of ether for delivery. Let me emphasize that pentobarbital alone has been given; no scopolamine, chloral, morphine, et cetera. On this account I believe we are in a position to judge and interpret its effects more accurately. When as in some hospitals scopolamine, morphine, etc., are used with pentobarbital it certainly makes interpretation much more difficult. For example, if a baby is blue, how can one tell if it is the morphine, or the scopolamine, or the pentobarbital?

The Routine

Primipara. The patient on admission is prepared locally and given one or two soapsuds enemas until the lower bowel is emptied. When the cervix is about one and one half to two fingers dilated and the contractions are five to six minutes apart, an initial oral dose of 6 to 7½ grains of pentobarbital is administered. If the patient is complaining and is not this far in labor, she is given this dose anyway. The 6-grain dose is given to small and average sized patients, which is the rule, and the 7½-grain dose to the very large ones (only occasionally). If the patient is further along in labor, that is, three or four fingers dilated and having three or four-minute contractions, we are more likely to give the 7½-grain dose simply to obtain a more rapid and deeper effect. If the patient is complaining a great deal we do not hesitate to give her a light drop ether analgesia until the pentobarbital has taken effect (when she comes in three or four fingers dilated). This may take place for fifteen to twenty minutes. Pentobarbital in these doses begins to take effect in twenty to twenty-five minutes when given by mouth (that is, without the ether). Absorption may be hindered by food in the stomach, which frequently happens with obstetrical patients.

While all these doses are used orally, we do not hesitate to give this rectally in about 2 to 3 ounces of plain water as an instillation. This is indicated when, first it is felt that the patient may have too much food in her stomach; second, when a repeat dose is necessary and we feel that the patient might not swallow the capsules but aspirate them, or when a patient may be hysterical and refuse to swallow, we can "fool" her by instilling this rectally. It is our impression that absorption takes place even more rapidly when given rectally, that is, in ten to fifteen minutes, without irritation or discomfort. We do not use the rectal administration except when indicated because we feel that the simplicity of the oral administration is a definite advantage.

The second dose is 3 grains which may be given in one, two, or three hours depending on the initial effect, and the subsequent doses are 3 grains, usually given in about three or four hours as indicated. The indication for a repeat dose usually depends on the lucidity of the patient. As with all forms of amnesia the patient may rise with her contractions and apparently complain about them, yet we do not repeat pentobarbital for this. It is only when we feel that the patient is "remembering" too well and is too "clear" mentally that it is given, especially when a fairly long interval of three hours or more has elapsed between doses. However, even with this indication as a basis, it is not uncommon for a patient when interrogated two or three days later to find that she had complete amnesia, although she may at some points in labor appear to answer questions apparently with some accuracy. It is a combination of both these factors that is important in the deciding subsequent medication.

Multipara. The intial dose is again at least 6 grains and frequently 7½ grains orally as with primipara. We try to give this when the patient is one and one-half fingers dilated and having seven to eight-minute contractions. We never hesitate to give this initial dose even though the patient is farther along, that is, two to three fingers and having harder contractions. We are never afraid of the patient dilating too rapidly because we feel quite sure that pentobarbital does not depress the baby. As you know, morphine is unsafe to use in multipara because it is definitely a respiratory depressant of the newborn. We can tell you that pentobarbital is absolutely safe—we never worry about its effect on the infant, no matter how short a time has elapsed

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Excerpts from an address at the meeting of the National Association of Nurse Anesthetists, St. Louis.

between its administration to the mother and the birth of the baby. Rectal administration can be used with multipara since frequently they have food in their stomachs on admission. Also a few minutes of light drop ether may be added to give a faster amnesia to the patient, as with the primipara, until absorption takes place. Our aim is to wipe out memory as soon as the patient complains and keep it so.

Conclusions

(1) Pentobarbital sodium to be effective for ideal amnesia in obstetrics must be used in large enough initial doses and total doses.

(2) The degree of percentage of complete amnesia in labor for pentobarbital is the best we have ever obtained (about 90 per cent complete and 10 per cent partial).

(3) The condition of the mother and fetus are not endangered by its use in the dosage we have given, and the infant mortality rate for these 500 consecutive cases is definitely the lowest we have had.

(4) Pentobarbital can be used by itself during labor to obtain amnesia. No morphine or other drugs are necessary.

(5) The simplicity of administration and effectiveness should aid in making it more widely used in obstetrics.

(6) Pentobarbital gives the best amnesia that we have ever had for multipara.

(7) The theoretical explanation of the mechanism of action of pentobarbital is advanced.

The Hospital Book Shelf

(*Continued from page* 131)

NEW AND SUPPLEMENTARY FACTS AND FIGURES ABOUT TUBERCULOSIS. By Jessamine S. Whitney. National Tuberculosis Association, New York City. 1935. $0.50.

This booklet consists mainly of tables grouped in three divisions as follows:

1. Mortality from tuberculosis.
2. Tuberculosis infection, including the results of tuberculin tests.
3. Statistics on hospital beds, stage of disease on admission to sanatoria, amount of tuberculosis nursing service, and receipts from the sale of seals.

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The "Quintuplets" and the Dafoe Hospital, Corbeil, Ont.*

OF INTEREST TO MANY is the Dafoe Hospital for the Dionne Quintuplets. Situated at Corbeil, some 3½ miles from Callander, it is a monument to a great and successful experiment in infant welfare and child hygiene.

The story of the first few weeks after birth shows how necessity was the creator of a novel institution. Born in a humble farm-house home, the babes, or rather the first of the babes, were delivered by a midwife whose dwelling is but a stone's throw from the Dionne homestead. The condition of the mother having become increasingly alarming, Dr. Roy Dafoe was summoned. Observing the utter lack of even the simplest facilities for proper care of the 1½ to 3 pound mites, Dr. Dafoe immediately sought professional assistance.

Some 12 miles to the west of Corbeil lies Bonfield, where the Ontario Division of the Canadian Red Cross Society was operating one of the twenty-four outpost hospitals scattered throughout northern Ontario. Frequently the assistance of the Red Cross nurse had been sought by Dr. Dafoe on other similar, if less outstanding, occasions. It was natural, therefore, that in this emergency he should turn to the Bonfield Outpost. For several days the nurse fought valiantly and alone, save for the encouragement and guidance of Dr. Dafoe, until relief nurses and supplies, including incubators, could be made available. The arrival of these only served to emphasize how inadequately the Dionne home could serve as an emergency hospital. The use of the nursery of the Bonfield outpost or the wards of a large hospital building was imperative; and it is a credit to the good judgment of Dr. Dafoe that the hospital was built almost opposite the Dionne home.

About 3½ miles to the northeast of Callander along a gravel highway, which has now no resemblance to the winding, hilly ribbon of road along which Dr. Dafoe travelled on that first visit to the Quintuplets, the Hospital will be found on a slight elevation to the left, facing the south. Outlined by a heavy wire fence six feet high and topped by a row of three barbed wires, the lot upon which the hospital stands is quite rough and barren, but similar to the rugged stretches so characteristic of the North. In front of the gate stands a little office suggestive of a sentry box. With back to the gate, one sees, to the right and across the road, the Dionne homestead on a slightly high elevation. To the left is the weatherbeaten frame dwelling of the midwife, whose little refreshment booth stands immediately across the road.

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It is to be hoped that for many years the Quintuplets may remain at Corbeil to benefit fully from the environment of the Dafoe Hospital.

*We are indebted to Dr. W. S. Caldwell, of The Ontario Division of the Canadian Red Cross Society, for the description of this famous little hospital.

Excerpt from the Report of the Committee on Small Hospitals of the Canadian Hospital Council.

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THE OLD FAITHFUL dust mop, so important to the shiny floors of hospitals, is going to have a new lease on life. A chap by the name of F. Abbott

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